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**ASSESSING THE INFLUENCES OF WEBSITE  
DESIGN OVER THE CHOICE OF UNIVERSITY  
FOR UNDERGRADUATE STUDY, USING THE  
UNIVERSITY OF CHESTER AS AN EXAMPLE**

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**OCTOBER 2012**

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## **Abstract**

This paper seeks to attain which website design considerations a university must make to engage undergraduate students, using the University of Chester's website as a basis for assessment. It further endeavours to evaluate the degree in which the University of Chester's website meets the needs of prospective undergraduate students. Finally, this paper attempts to measure which website elements a user would select in designing their ideal university web page.

The findings show a high level of support for the marketisation of Higher Education, with market behaviour reflecting a shift power online, to that of the undergraduate consumer. This paper considered prospective undergraduate students as being generation Y consumers, seeking a positive interactive website experience, to aid evaluation and help determine the value of a course. These consumers place considerable trust in their online experience, with anything falling below their expectations having an adverse effect on their perceptions of the brand.

The findings support that there are two types of consumer, and in satisfying the needs of both, universities should adopt a user-centric approach to website design. The study considers visual engagement, usability and written content as the three primary website design considerations that a university must address, in order to satisfy prospective undergraduate students.

This paper concludes that a university's website provides one of the greatest opportunities to influence and satisfy the needs of the undergraduate market.

## **Declaration**

This work is original and has not been submitted previously for any academic purpose. All secondary sources are acknowledged.

Signed: \_\_\_\_\_

Date: \_\_\_\_\_

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# Chapter One

## Introduction



# 1 Introduction

## 1.1 Background contextualisation to Research

From September 2012, new undergraduate students applying to study in Higher Education Institutions across England, will, for the first time, have to pay an increased tuition fee of up to £9,000. Against a background of fee increases and a genuine risk for universities to experience a drop in applications, competition for attracting the best students is said to be “*hotting up*” (Sitemorse, 2012).

Butler (2011) applauds this market-led approach to competition within Higher Education (HE), emphasising a shift in power, with students being placed at the centre of an institutional focus (Forest, 2012). This shift has been realised by universities across England with student satisfaction being placed of paramount importance. Forest (2012) explains that as power is now with the student, it is important now more than ever for universities to be responsive and meet the needs of a new, highly competitive marketplace (Forest, 2012).

However, caution is required as while this marketplace presents a number of opportunities and potential benefits for universities, it is also coupled largely with risk and uncertainty. It has been recognised that the UK Government was the key force behind the changes, as they were perceived to be eager to develop a truly competitive market within HE, with students to be largely perceived as consumers (Molesworth, Scullion and Nixon, 2011).

This understanding is otherwise known to be the ‘marketisation of HE’, at present there is greater importance to utilise and develop marketing tools and techniques to meet the needs of these consumers (Sorell, 1994).

## 1.2 Research Question

Applying thoughts of Zeithaml (1981), consumers typically evaluate the service after a trial has occurred; something which with the exception of university open days is limited for this type of service. According to Benjamin and Lee (2005) this information is most likely to be sought via the university website, with the internet being the primary tool for the information search (Schimmel, Motley, Racic, Marco, and Eschenfelder, 2009).

Consequently, the author wished to explore in detail effectiveness of web design, and its role within the recruitment of undergraduate students.

### **Main proposal:**

- To explore the effectiveness of web design, for the selection of undergraduate study at university.

### **Research question:**

- Assessing the influences of website design over the choice of university for undergraduate study, using the University of Chester as an example.

### **Aims of the research:**

- To critically analyse the contemporary literature in reference to students being consumers of Higher Education.
- To understand the contemporary literature regarding website usability.
- To identify the most effective e-marketing components for the engagement of undergraduate students.

## 1.3 Justification for Research

At present there has been a considerable change in focus for university websites with a targeted customer centric approach being adopted to meet their needs. After the recent build of Robert Gordon University website, the university reflected that the process was *“far more than simply a redesign exercise”*, with the objective of being to create a web site *“responsive to user expectations and requirements”* (Quilty-Harper, 2010).

Despite university websites playing such a large role in the student decision making process and the large body of research on web site usability, internet marketing and HE marketisation, there is a lack of research that brings these strands of theory together. Furthermore, academic understanding regarding the influences of website design over the choice of university, and more specifically the undergraduate market has largely been left untouched.

#### **1.4 Outline of this paper**

This paper presents a critical evaluation of what potential undergraduate students want from University website design, using the University of Chester as an example. It is structured as follows:

- Chapter One provides an introduction to the paper and ‘sets the scene’ for this dissertation. It outlines the marketisation of Higher Education and how universities are increasingly looking at ways to meet the needs of potential students, setting the context in which the author works. The research question is discussed and justified, and an outline of the methodology is presented.
- Chapter Two reviews relevant literature to provide a theoretical foundation for the research question. The literature review identifies the developments in marketing, namely internet/e-marketing and how usability is key to facilitate answering the needs of a developing market.
- Chapter Three details the research methodology including the collection and analysis of both qualitative and quantitative data and its applicability to the research question. The chapter also discusses ethical considerations of the research.
- Chapter Four presents the research findings, and draws conclusions from the chosen methodology, the research question.
- Chapter Five discusses the research question and limitations of the study, suggesting recommendations for further research.

# **Chapter Two**

## **Literature Review**

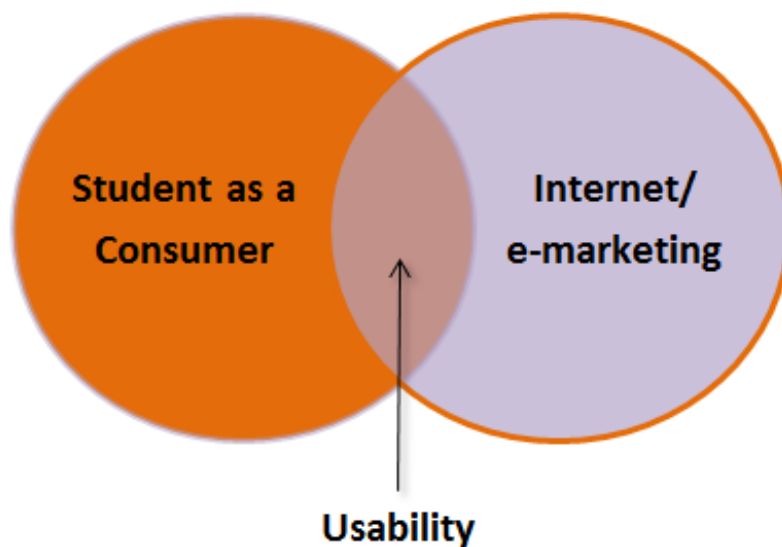
## 2 Literature review

### 2.1 Overview of literature

The literature examined in this section of the paper seeks to gain a broader understanding of the observation that students are to be viewed as consumers of Higher Education (HE) and how the developments in marketing, namely internet/e-marketing can meet the needs of this developing market (Molesworth, Scullion and Nixon, 2011; Krywosa, 2010a).

The paper will also examine website usability in the assessment of consumer perception and its impact on their decision making, with the linkages between each section being illustrated in figure 1 (Wolfenbarger and Gilly, 2001; Sicilia and Ruiz, 2007; Voorveld et al., 2009; Smith et al., 2009).

**Figure 1 – Connecting the literature**



## **2.2 Student as a consumer**

### **2.2.1 Research Aim**

To critically analyse the contemporary literature in reference to students being consumers of Higher Education (HE).

### **2.2.2 Applicability to research**

To gain a broader understanding of theoretical beliefs of students being consumers of HE, this will enable this paper to explore the needs and wants of this market as well as highlighting the rationale which has led to this perspective.

### **2.2.3 Definition and characteristics of marketisation within higher education**

The marketisation of HE within the United Kingdom is best described as a trend towards greater competition, with drivers including state control regarding market legislation and the institutional desire to increase student numbers without a compromise on quality (Molesworth, Scullion and Nixon, 2011).

In general terms Whitfield (2006) defines marketisation as the process whereby market forces are imposed on public services. Furthermore, Vickers (2009) asserts that the process of marketisation is not a new concept, having been underway for over twenty years (Hemsley-Brown et al., 2006; Kotler and Fox, 1985).

It has been widely-used to reduce wasteful spending on services for which there may no longer be a demand, to generate healthy competition, stimulate providers to use existing resources to offer better quality services and to ultimately achieve lower levels of public investment (Vickers, 2009).

Traditionally fields such as healthcare, environmental services, universities and other providers of adult education have been funded by local and central government and have all been affected with the growth of marketisation. As the government has adopted what Burke (2004) asserts as a belief that marketisation of a sector will bring

marketplace ideology, considering that the private sector functions better and more rationally than the public sector. Furthermore, Gibbs (2002) recognises this trend, underlining that Universities have transferred a number of marketing practices and concepts from other sectors and applied them in the HE sector.

Current thinking understands that the majority of educational institutions recognise *“that they need to market themselves in a climate of competition”* both locally and internationally (Hemsley-Brown and Oplatka, 2006:318).

#### **2.2.4 Conflict between HE and Marketing**

Critics of the marketisation of HE, including Barrett (1996) assert that the introduction of market forces in education, morally contradicts the value of education leading to it *“rapidly being regarded as a business, like any other”* (Hemsley-Brown et al., 2006:320).

Mainstream writings on marketing in HE do not share this perspective, clearly citing that HE in essence is a business. With institutions such as universities mirroring the business model for service sector businesses (Zeithaml, Parasuraman and Berry, 1985; Parasuraman, Zeithaml and Berry, 2004).

Morrish and Sauntson (2011) disagree with these suggestions that marketisation is a positive and a creator of a free market, rather than representing an opportunity to commodify academic education into a quantifiable driven process. They argue that a focus of performance measurement will in fact increase state intervention and micro-management of university life rather than create a freer marketplace for growth and opportunity (Molesworth et al., 2011).

Contradictory to the beliefs of Molesworth et al. (2011), it is Conway, Mackay and Yorke, (1994:31) that argue that rather than students being considered as consumers of HE, the consumers themselves are the *“products with the employers being the customers”*. This is an interesting point highlighting who decides the value of the universities product, the student, the employer or both? This would suggest that

universities have to communicate the value and quality of their programmes to more than purely the potential student marketplace.

### **2.2.5 Political influence**

As the central instigator for market change, the Government, as Maringe (2005) asserts has, in the pursuit for institutional efficiency has encouraged market forces to step ever closer, with the privatisation rather than marketisation of HE (Meek and Wood, 1997; Scott, 1999; Paton, 2011).

It is suggested that government decisions on HE marketisation, and the positioning of the student as the consumer of HE, was based upon seeking to raise the quality of each undergraduate course, whilst seeking to minimise HE financial burdening on the public purse (Kelley, Donnelly, Skinner, 1990; Ashley, 2012; Winnett and Paton, 2012).

To ensure that a university acts responsibly to the needs of students, the UK Government put a policy in place for universities to ensure fair access for all students (Winnett et al., 2012). This, plus the provision of bursary and funding packages by HE providers it has been argued by Lewis (2012) that students are actually better off with the changes, putting them in the driving seat as consumers (Archer, Hutchings and Ross, 2003).

Nevertheless, for as long as there is a cap on student places within the HE sector, the government will control the market, with less of a dramatic shift of power from educator to student, but realisation that to achieve quality expectations universities must answer the needs of students (Scott, 1999; Shepherd, 2009).

### **2.2.6 Value and Choice**

These expectations must be met by what Young (2002) considers as a machine-like modern university, embodying the philosophy that it is no longer customary to find teacher and students but ‘suppliers’ and ‘consumers’.



However as Parasuraman (1986) notes, the intangibility that is associated with the service (programme) offering can result in difficulties in service providers such as universities differentiating their offerings from those of competitors, while students find it equally difficult to evaluate a service before it is acquired and consumed (Hill, 1995).

It is for this reason that assessments by the consumer in HE on criteria such as quality can be subject to interpretation (Kelley et al., 1990; Hill, 1995). As Mills (1986) suggests that quality depends not only on the performance of the service provider's personnel, but also on the performance of the consumer, which can make quality management problematic.

Managing the expectations and building trust with a potential student can be the difference between a successful or none successful recruitment to a programme. Theorists including Berry, Zeithaml and Parasuraman (1985) in addition to Grönroos (1982) agree that to successfully satisfy the market you must apply "*gap theory*". Cronin and Taylor (1992) assert that consumers perceptions are to be collated, then minus their expectations and the gap left will indicate the quality measured in the eyes of the consumer (Hill, 1995).

It is essential that this gap is addressed either through direct improvements to a programme, or effective targeted approach to marketing designed to satisfy the needs of the consumer (Baldwin and James, 2000; Naidoo, 2007). Wilkins and Epps (2011:412) explain that when consumer engages in high-involvement purchasing such as a university degree programme, their typical behaviour is "*to seek as much information as possible to inform their buying decision*".

The move to consumerism in the area of seeking information, has like many elements of modern day life been improved by the online environment (Smith and Pino, 2005). Websites such as RateMyProfessors.com, ProfessorPerformance.com and StudentsReview.com all put the power in the hands of the student. This website empowers the student to give their personal evaluation of a faculty or teaching, via a categorised and visually engaging way (Wilkins, et al., 2011).

Another move towards consumerism and marketisation in UK HE is that from September 2012, all universities will have to publish a set of Key Information Sets (KIS) for every undergraduate course showing information and data on student satisfaction, graduate earnings, teaching hours, assessment methods, and tuition (Baker, 2011). This data is presented in a graphical and easy to view way, with comparisons between courses simplified (HEFCE, 2012).

This information has been seen by some in the media as Universities providing ‘key information’ that will help “*their student customers make value-for-money comparisons*” (Coughlan, 2011). This was further backed by both the Universities Minister David Willetts, who suggested that this move was to empower students, with the President of the National Union of Students supporting the development of a HE consumer marketplace, in which students are less likely to “*make their choices on flimsy grounds*” (Coughlan, 2011).

This move in the eyes of Sorell (1994:913) can be interpreted that “*the consumer became king*”, with consumerism in HE driving universities to reconsider their role, and customer satisfaction becoming management's high priority, as “*the purpose of business is the customer*” (Drucker, 1989:85).

## **2.3 E-marketing/Internet Marketing**

### **2.3.1 Research Aim**

To identify the most effective e-marketing components for the engagement of undergraduate students.

### **2.3.2 Applicability to research**

The author will seek to establish what the components of e-marketing are and how relevant they are to engage consumers within the undergraduate marketplace.

### **2.3.3 Meeting the needs of consumers**

The term marketisation has, by a number of authors, been used interchangeably with the terminology ‘consumerism’ (Buskirk and Rothe, 1979; Swagler, 1994). The recognised godfather of Marketing Philip Kotler (2000:152) gave his definition of consumerism as an “*organized movement of citizens and government to strengthen the rights and powers of buyers in relation to sellers*”, which draws a number of parallels with that of Molesworth et al. (2011) explanation of the concept of marketisation.

Whichever terminology is applied, parallels can be drawn between the changes to the HE sector and that of consumerism, with both Kotler (2000) and Cravens and Hills (1973) concluding that there is a power shift away from the provider, to that of the consumer. This shift is illustrated further with Crawford’s (1991) classification of students as the “*primary customers*” of a university. Through the realisation of the need for greater market-orientation, a university such as Chester can satisfy the needs of consumers through focusing on improvements to its marketing proposition (Grönroos, 1989; Douglas, Douglas and Barnes, 2006).

It is commonly agreed that a successful marketing concept illustrates the importance of the customer (Hill, 2000; Ford, Berthon, Brown, Gadde, Hakansson, Naude, Ritter, and Snehota, 2004; Svensson, 2005; CIM, 2007). As Proctor (2008) identifies that

primary objective of marketing is to satisfy the customers wants and needs, it is recognised by Eccles (2004:410) that universities have been moving away from the traditional thought of “*If you build they will come*” to ensuring that their message and values are communicated to every customer group (Porter, 1981).

#### **2.3.4 New marketing opportunities**

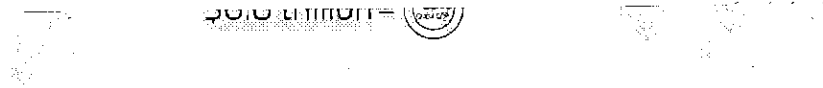
Applying this marketing theory to the growth of the internet, has been perceived as presenting many marketing opportunities for the targeting and meeting of consumers’ needs and wants (Hill, 2000; Svensson, 2005; Proctor, 2008). Fuelled by consumer/user demand, the rapid growth of the internet stems back to the 1960’s, however over the last decade it has accelerated in scope and prospects for business (Aldridge, Forcht and Pierson, 1997).

The internet, as observed by Adam, Mulye, Deans and Palihawadana (2002) is now regarded by marketers as an “*outstanding marketing tool in the advertising arsenal*”, the internet is viewed by many as “*the most effective promotional tool of the century*” (Herbig and Hale, 1997:95; Samiee, 1998). Since its creation, the Internet has seen a colossal growth, from a mere 1,000 pages on the Web in 1992, less than a decade later seeing an increase of over two billion web pages at the beginning of the 21<sup>st</sup> century (Ektron, 2001; McKeever, 2003).

#### **2.3.5 Market growth**

This growth has been two fold, with consumers’ demands driving business growth online, and businesses themselves viewing opportunities for exploitation or development. With such a powerful tool, the internet has also forced a number of businesses online in order to remain competitive.

### 2.3.5.1 Figure 2 – Growth in Internet Traffic



*Source: NewScientist (2009).*

Since the dot com era of the early 1990's businesses have sought to apply increased marketing theory and practices within an increasingly competitive environment. Sussman and Pollack (1995) highlight that even in the early stages of the dot com era, marketers were exploiting market opportunities online, with Web spending by advertisers jumping from \$37 million in 1995 to \$157 million in the first nine months of 1996.

With growth projected by the NewScientist (2009) set to continue long-term, it is estimated that global internet traffic will increase by fifty percent annually (See figure 2). From the beginning of 2012 there was estimated "2,267,233,742 Internet users worldwide", and with increasing developments in hardware including PC's, laptops, networks, ultrabooks and the explosion of mobile technologies including tablets, has fed the need for marketers, especially in HE to think or conjure new ways to engage experienced online consumers (Internet World Stats, 2012).

### **2.3.6 Generation Y Consumers**

The generation of young consumers in the undergraduate target market are defined by Molesworth et al. (2011) as being vastly proficient online, are often classed as Generation Y, or the millennials (Ferguson, 2011; Lazarevic, 2012). These consumers are described as being even more sophisticated and media-wise than their Generation X predecessors (Coupland, 1991; Howe and Strauss, 2000; Paul, 2001; Chung, Holdsworth, Li and Fam, 2009)

It is widely established that generation Y consumers must value the brand prior to purchase, believing a particular university offering (or course) is better than anything else on the market (Keller, 1993; Grassl, 1999; Keller, 1999 Washburn, Till and Priluck, 2000). In addition, this market is viewed by Nga, Yong and Sellappan (2010) to have the need to be appear successful, want to be associated with successful brands (Howe, 2006).

Moore and Carpenter (2008) identified that typically generation Y consumers value fun, excitement and enjoyment of the entire purchase experience more so than previous generations (Arsenault and Patrick, 2008). These consumers are said by Sherry and Fielden (2005) to be influenced greatly by the presence of the internet, with the opportunity to interact and connect more with brands than previous generations whom have not grown up with the internet. However, Merrill (1999), Keller (1999), Saxton ( 2007), Noble, Haytko and Phillips (2009) agree that any inconsistencies in an organisations marketing message will diminish a generation Y consumer's trust in, and association with the brand (Smith, 2012).

### **2.3.7 The presence of the internet**

High expectations and high media literacy lead Berkowitz and Schewe (2011) and Pendergast (2009) to the assumption that generation Y consumers are more heavily influenced by marketing communications presented across multiple forms of media. What's more, with “*45 per cent of Internet users*” being from a mobile phone, prospective undergraduate students are understood by Howe (2006) to be are more connected than previous generations (Office for National Statistics, 2011).

Jeong, Fiore, Niehm and Lorenz (2009) assert that with the growth and maturity of e-commerce and Internet technology, has led to rapid developments in a variety of website designs, product offerings, services and information quality. These changes have subsequently led to increased ease of use, usefulness, visual organisation, and *“playfulness of web sites”* (Elliott and Speck, 2005; Liu and Arnett, 2000; Lohse, Bellman and Johnson, 2000; Yang, Cai, Zhou and Zhou, 2005; Wroblewski, 2003; Porter, 2006).

Hess (2005) and Lohse et al. (2000) agree that in order to differentiate a product or service offering online, businesses have to invest in a continual process of improving their website features to enhance their users' experience online, otherwise known as e-marketing (Adam, et al., 2002). However, Wind and Mahajan (2001:2) describe e-marketing as not just *“traditional marketing on steroids, or just a faster or newer channel, but a new approach to marketing”*.

### **2.3.8 What is e-marketing? A definition**

According to Domegan (2008) e-marketing represents the marketing exchange through use of Internet and interactive technologies to create dialogue with customers. With a focus on engagement, communication is said to be a two way process, with the role of the customer shifting from passive to active role (Coviello, Milley and Marcolin, 2001; Brady, Saren and Tzokas, 2002; Brookes, Brodie, Coviello and Palmer, 2004; Brodie, Winklofer, Coviello and Johnston, 2007).

The term 'e-marketing' has been used synonymously with 'online marketing' and 'internet marketing' (Leonard, 2001). The problem when defining e-marketing is that it can represent a number of different meanings in different situations (Quinton and Khan, 2009). To an advertiser the term e-marketing relates to driving traffic and brand building through internet advertising, whereas for website developers the focus is chiefly on building websites which are robust, with high levels of traffic (Kalyanam and McIntyre, 2002).

However it is argued by Sharma (2011) that although e-marketing has its strengths, generally people do not find internet marketing very persuasive, with web users said to perceive Internet advertising and marketing online to be intrusive and distracting.

### **2.3.9 Engagement through e-marketing**

To combat the perceived negative effects of marketing online, seeking to engage users, Gurau (2008) asserts that marketers should evaluate how audiences obtain and use information. Furthermore, Krol (2008) and McCarthy (2008) estimate that there are approximately 1.2 billion online searches conducted each month, highlighting that user controls of the communication process (Blattberg and Deighton, 1991; Holtz, 1999; Ihator, 2001; Rowley, 2001, 2004; Shankar and Malhotra, 2007).

Drawing reference to the “*playfulness*” that Jeong, et al. (2009:105) declares is required to engage users, Demangeot and Broderick (2006) support that the influence of improved e-marketing techniques and developments to online presence will create a positive consumer response towards a business’s products and services.

However, Jeong et al. (2009:105) does highlight that there is a considerable gap between e-marketing and website usability, notably that “*research is needed to better understand the nature of engaging experiences*”. The author acknowledges this gap and limited literature in the area of user engagement online, aiming to address this gap with this papers data collection methodology.

This is a central area of improvement for businesses, especially service providers like universities, as the electronic environment reduces physical interaction, and “*product qualities and benefits must be distilled and captured*” in an engaging way that can be “*communicated over the wire*” (Rowley, 2004:228).



### 2.3.10 The effects of E-marketing in HE

Higheredexperts.com (2012) which is recruiting for an online engagement job role specifies that online engagement encompasses the mastering of web, social media and email communication strategy.

Jessica Krywosa (2010a), Director of Web Communication at Suffolk University, believes that often HE providers try to calculate engagement based upon unrealistic and irrelevant metrics. These include the number of applications, the number of website page views, the number of people enrolled, the percentage that graduate.

#### 2.3.10.1 Figure 3 – calculating engagement: what do they want?

Source: North American Technographics\* Empowerment Online Survey, Q4 2009 (US)  
\*Conversationalists participate in at least one of the indicated activities at least weekly.

*Source: Forrester Research (2011).*

There is a growing need for engagement to be assessed through what the different target audiences will do. For example we can see in figure 3 that individuals are engaged in many different manners, from spectators to creators. This therefore shows

that *“it’s not true that comments and user generated content are the only ways that our community shows that it’s engaged”*, demonstrating a multitude of actions could be undertaken (Krywosa, 2010a).

By categorising engagement into differing levels/types of engagement, similar to that shown in figure 3, marketers are able to assess level of interest or engagement that is to be expected for a particular audience (Krug, 2006; Forrester Research, 2011).

In a further article on HE e-marketing, Krywosa (2010b) states that engagement can help a university *“gauge its place in the market, define new targets, and remain in the mix when it comes to positive or negative sentiment”*. It’s about *“brand management and building momentum in the community that supports your institution”*, a sentiment that be reinforced by the characteristics of a generation Y consumer (Krywosa, 2010b; Ferguson, 2011; Lazarevic, 2012).

## **2.4 Website usability**

### **2.4.1 Research Aim**

To understand the contemporary literature regarding website usability.

### **2.4.2 Applicability to research**

To discover what elements are essential for consideration and measurement when applying usability theory to web design. Additionally, the literature will seek to determine a number of best practice techniques to gain a broader understanding of how usability can meet the needs of a consumer.

### **2.4.3 Definition and characteristics of website usability**

Website usability can to a large extent be evaluated as *“the degree to which people (users) can perform a set of required tasks”* (Brinck, Gergle and Wood, 2002:2).

Furthermore, website usability is primarily concerned with the measurement of quality that a user experiences, when deploying a *“specified set of tasks in a particular environment”* (Usability Net, 2003; Georgievski and Sharda, 2006).

It is widely agreed that greater levels of usability are associated with lower levels of difficulty when undertaking a task, which is considered critical to the success in e-commerce (Davis, 1989; Teo, Chan, Wel, and Zhang, 2003; Flavián, Guinalú and Gurrea, 2006).

Through applying the thoughts of these authors and that of Casaló, Flavián and Guinalú (2008) the criteria for the measurement of website usability can be observed in figure 4.

#### 2.4.3.1 Figure 4 - The website assessment and measurement criteria

Assessment elements	Measurement indicator
Structural/Layout Understanding	The ease of understanding the structure of a system, its functions, interface and the contents that can be observed by the user.
Initial perceptions	The simplicity of use of the website in its initial stages.
Speed of use	The speed with which the users can find what they are looking for.
Ease of navigation to achieve goal	The perceived ease of site navigation in terms of time required and action necessary in order to obtain the desired results.
User control	The ability of the users to control what they are doing, and where they are, at any given moment.

*Source: Adapted from Casaló, et al. (2008)*

When reflecting on the banking industry it was Casaló et al. (2008) that indicated that the website usability is a determining factor for consumer satisfaction, for both choice and loyalty.

However, it would be unwise to draw parallels with consumers in the banking industry and those in HE. Both have different reasoning for using a website, with usability for banking customers being part of their service, whilst potential students would use a website to assess the value and quality post-purchase (Donthu, 2001; Wolfinbarger et al., 2002).

#### **2.4.4 Usability and consumer perception**

Gummerus, Liljander, Pura and Riel (2004) agree that perceptions of value and quality, to a large extent are based on the usability of website content. This said, Gummerus et al. (2004:175) admits that *“research concerning the effects of e-service quality and resulting satisfaction is still in its infancy”*.

Furthermore, Loiacono, Watson and Goodhue (2000); Aladwani and Palvia (2002); Yang and Fang (2004) and Yang et al. (2005) agree that design or usability of a website is one of the most important factors for determining the quality of a user's experience and the extent of consumer satisfaction in an online context (Spiller and Loshe, 1998; Casaló et al., 2008).

Applying the thoughts of Heim and Field (2007) the author believes this study should provide a balanced evaluation of service quality from both the perspective of the customer and the provider, research which Stiakakis and Georgiadis (2009) state has seldom been combined.

Nielsen and Lavy (1994) declare that traditional usability studies were concerned, in the main, with a product/services performance, however a number of studies by Nagamachi (1995); Hofmeester Kemp, Blankendaal (1996); Jordan (1997); Han, Yun, Kwahk, and Hong (2001) stress that usability should focus more on behavioural and emotional factors in the design of product, especially in an electronic environment (Dürsteler, 2000; Cloninger, 2000; Han et al., 2001; Nielsen, 2006).

#### **2.4.5 Consumers response and involvement**

A study by Voorveld, Neijens and Smit (2009) into a consumer's response and involvement to websites is associated to a number of personal/emotional factors in addition to web related factors, which need to be considered and assessed (Dürsteler, 2000). Furthermore, websites which have higher levels of involvement, are perceived more positively by online consumers (Karson and Kargaonkar, 2001; McMillan, Hwang and Lee, 2003; Fortin and Dholokia, 2005; Dahlén, Rasch and Rosengren, 2003; Wu, 2007).

This is due to the website engaging the cognitive senses of the user, ensuring increase involvement when processing information (Friedman, 2008; Voorveld et al., 2009). This is where the internet differs from traditional marketing mediums, such as television, as the consumers decide what information to access and how long they want to expose themselves to the message (Dahlén et al., 2003).

#### **2.4.6 Increase consumer involvement**

To increase consumer involvement in a website, there must be considerable interactivity and website flow. McMillan et al. (2003), Jee and Lee (2002), Chung and Zhao (2004) and Wu (2005) all agree that consumers that perceive a website as more interactive, often have a more positive impression of that website (Supphellen and Nysveen, 2001; Steenkamp and Geyskens, 2006; Singh, Fassorr, Chao, and Hoffman, 2006; Voorveld et al., 2009).

Furthermore, Csíkszentmihályi (1975) asserts that the flow of a website can be assessed by the extent to which a person is fully immersed in what he or she is doing. This perceived 'flow' also enhances the consumers feelings of control over a website experience, as *"having control over the information exchanged increases the pleasure of the event itself"* (Sicilia and Ruiz, 2007:2; Voorveld et al., 2009).

Constantinides (2004) asserts that usability is also a quality criteria for a website, assessed on the basis *"the ability to find one's way around the web, to locate desired information, to know what to do next, and, very importantly, to do so with minimal effort"* (Nah and Davis, 2002:99)

Alongside the designed website functionality, such as navigation, the design/execution of content on a web page is of equal importance (Wroblewski, 2003; Porter, 2006). Vivid websites with *"moving images evoked more positive affective responses than static websites"* (Coyle and Thorson, 2001; Voorveld et al., 2009:543). Yates and Noves, (2007) claim the reasoning for this could be that websites that apply animation, audio or video appeal to multiple senses. Consequently, the persuasive power of the website could be enhanced (Yates and Noves, 2007).

#### **2.4.7 Quality of service**

Constantinides (2004) belief that website usability is a criteria for perceived quality of product or service by a consumer, raises the question of how quality is measured? (Agarwal and Venkatesh, 2002). Smith and Eroglu (2009) declare that measurement of quality must be assessed over two variables:

- Quality of an online service or online transaction (Madu and Madu, 2002), and
- Consumer's online experience relates to outcomes such as customer satisfaction, customer loyalty, and repeat purchase intentions (De Wulf, Schillewaert, Muylle, and Rangarajan, 2006; Yang and Fang, 2004).

The first variable relates to the functionality and usability of the online task, with the second assessing the emotional/personal response to participation on how this made them feel.

#### **2.4.8 Measuring the quality of a website**

Since businesses have interacted with their consumers online, researchers are said to have focused on assessing the quality of a website, dependent upon proper design and functionality (Smith et al., 2009). Typically researchers recognised quality as usability, measuring human-computer interaction empirically (Madu and Madu, 2002).

Criteria for the assessment of quality consisted of the quality information (content), ease of use, customisation, interactivity, multimedia capabilities, trust, error tolerance, and user emotional response (Agarwal and Venkatesh, 2002; Barnes and Vidgen, 2003; Green and Pearson, 2006; Liu and Arnett, 2000; Loiacono, Watson, Goodhue, 2007; Palmer, 2002; Smith, 2012).

#### **2.4.9 Consumer behaviour online**

Over time, researchers have broadened their focus from a website to an online service interaction (Smith et al., 2009). This has meant going beyond just the functionality, with many researchers focusing more on consumer behaviour. Interestingly, Wolfinbarger et al. (2001) identified different patterns among drivers and outcomes for consumers online. They separated consumers into “*goal-directed shopping*” and “*experiential shopping*”.

Both types of consumer have a need for usability to be assessed and improved. With ‘goal-directed shoppers’ requiring an experience that will get them to their desired outcome as easily and efficiently as possible, enabling the ‘experiential shopper’ to have an online experience in which they feel in control (Wolfinbarger et al., 2001; Sicilia and Ruiz, 2007; Voorveld et al., 2009; Smith et al., 2009).

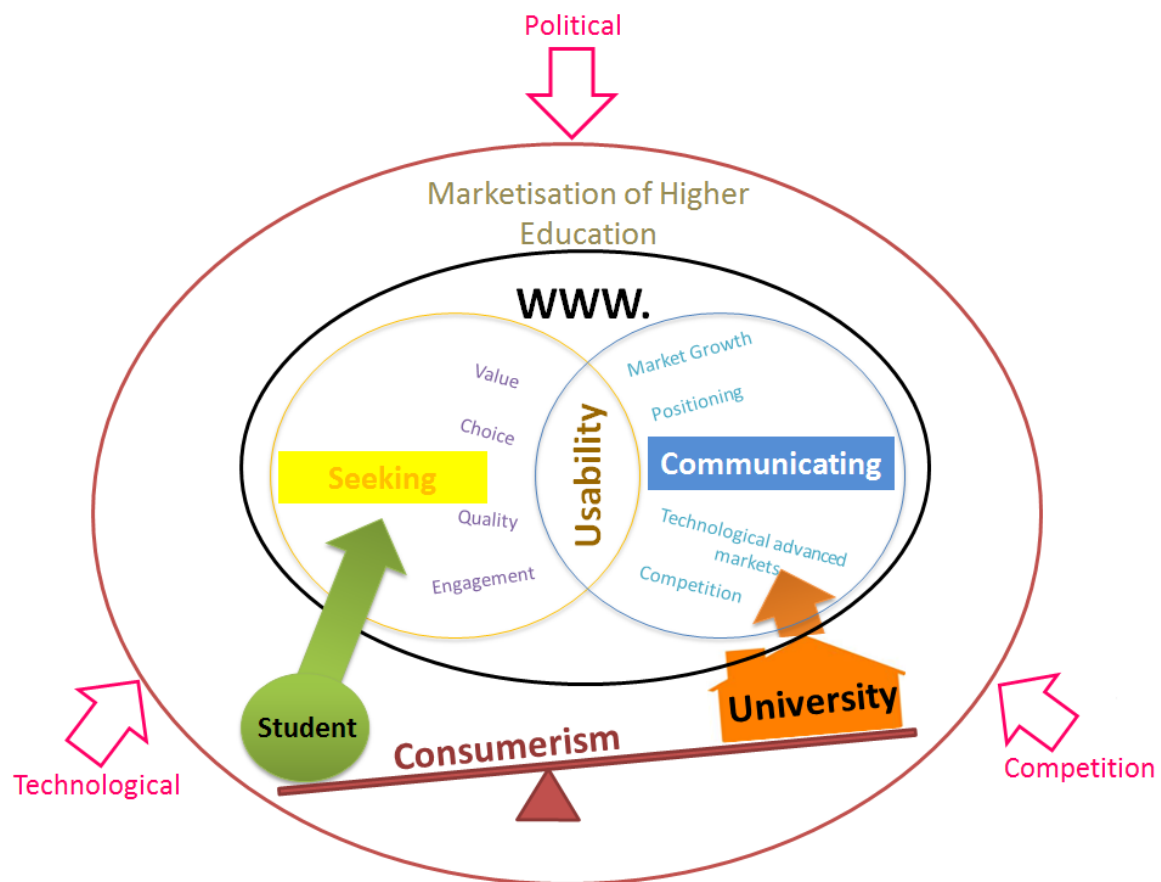
### **2.5 Conceptual model**

Similar to the views of Berthon, Pitt, Cyr, and Campbell (2008) that the internet as a marketplace is constructed of macro and micro dualities. This is reflected in figure 5, the conceptual model (CM), which the author constructed based upon the various models, theories and ideas that have been introduced throughout this chapter. The framework developed will be underpinned by the research objectives of this paper, ultimately to aid the answering of this papers research question.

The symbolic representation of this model depicts the key areas of how internet marketing, driven by usability to meet the needs of undergraduate student as a consumer for HE.



### 2.5.1 Figure 5: Conceptual model

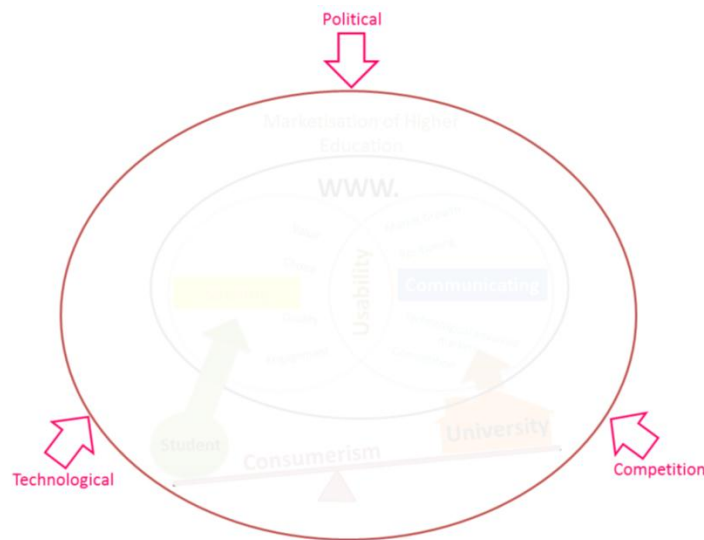


The various bodies of literature within this conceptual model (CM) are expressed in a graphical manner to display the current landscape in which this papers research question, aims and objections are working in. The different theoretical components that make up this model are discussed further in figure 6.

Key - Figure 6	
Pink = <b>Macro environment</b>	Pale blue = <b>factors influencing a university's communication</b>
Green = <b>undergraduate student</b>	Red = <b>Consumerism</b>
Yellow = <b>student seeking</b>	Orange = <b>university perspective</b>
Blue = <b>university communication</b>	Black (Bold) = <b>Internet or WWW</b>
Brown = <b>Usability</b>	

## 2.5.2 Figure 6 - Conceptual model explained

### Macro environment

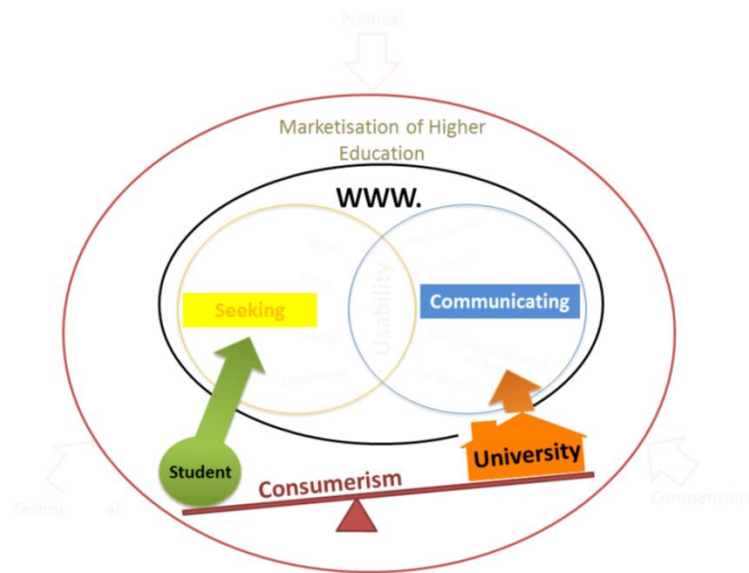


The **Macro environment** as depicted in the CM, represents the marketisation of HE, with the student now having a dominate role as consumers with recruiting universities such as Chester, driven to satisfy consumer needs (Berry et al., 1985; Grönroos, 1982; Cronin et al., 1992; Hill, 1995; Baldwin et al., 2000; Naidoo , 2007).

There are a number of influences that have fed into the creation of this marketplace, technological advancements (Ektron, 2001; McKeever, 2003; NewScientist, 2009) political legislation and influence (Baker, 2011; Coughlan, 2011; Buskirk et al., 1979; Swagler, 1994).

The final factor that influences universities from the macro-environment is competition and more specifically the need to remain competitive (Molesworth et al., 2011; Ashley, 2012). This is linked to Burke's (2004) rationale that marketisation of HE has brought marketplace ideology, with the transfer of a number of marketing practices and concepts as they need to market themselves (Gibbs, 2002; Hemsley-Brown and Oplatka, 2006).

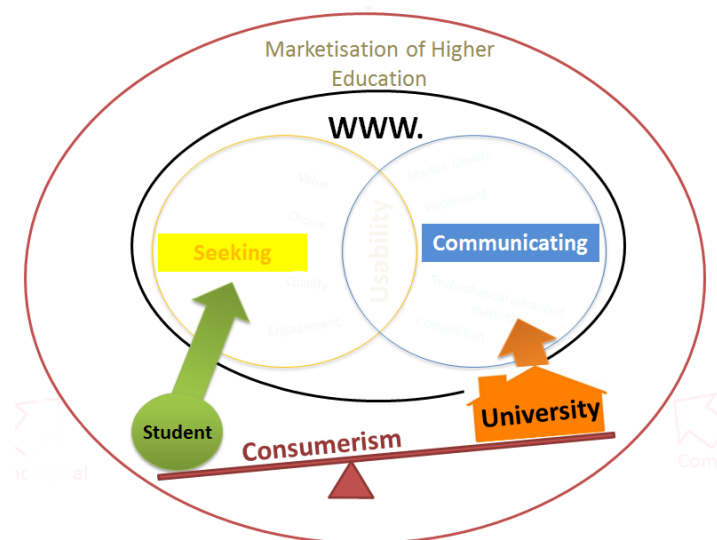
## Micro environment



The Model is centred around the two-way marketing communication process between; firstly a **student seeking** information to satisfy their need or decision to choose a university; and secondly the **university**, utilising marketing tools and techniques to **communicate** how they can satisfy students wants and needs (Cravens et al., 1973; Grönroos, 1989; Crawford, 1991; Kotler, 2000; Baldwin et al., 2000; Douglas et al., 2006; Naidoo, 2007).

Eccles (2004) recognises the importance of customer satisfaction for universities, with Hill (2000), Ford et al. (2004), Svensson (2005) and CIM (2007) agreeing that successful marketing relies upon the importance of the customer. This yet again shows a shift in power and increased influence of the **student** within this marketplace moving more towards consumerism (Kotler, 2000; Cravens et al., 1973).

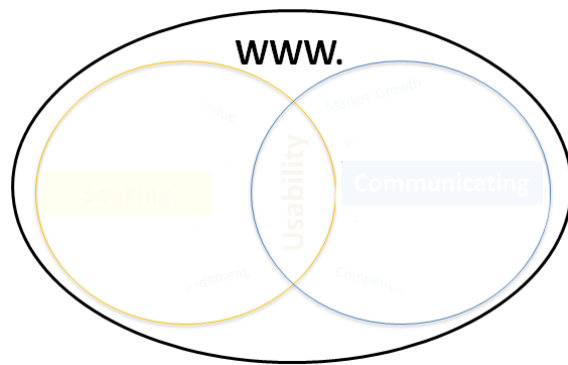
## Consumerism



Gibbs (2002) recognises this trend, underlining that Universities have transferred a number of marketing practices and concepts from other sectors and applied them in the HE sector. This is reflected within the **communicating circle** of the CM, as universities consider their marketing activity online based upon influencing factors of competition, market positioning, technological assumptions of the market and competition.

The CM also depicts a shift in power to that of a **student**, as **consumerism** has led to them having wider choice when **seeking** to purchase (Drucker, 1989; Sorell, 1994; Smith et al., 2005; Baker, 2011).

## WWW. – Online communication medium



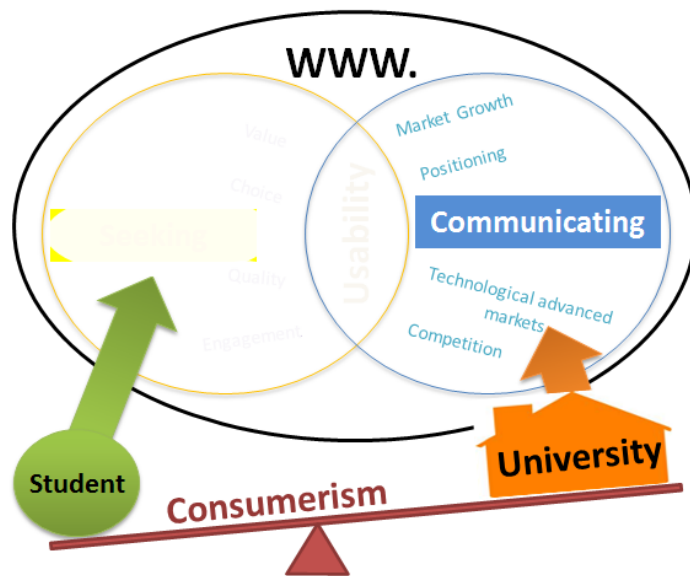
The model depicts the interaction between the student and a university via the internet/or WWW as shown. Increasingly, as students seek to gather information to aid their decision of university choice, they are doing so through using the internet (**Adam, et al., 2002**).

The internet provides generation Y consumers, or the millennials seeking to gain a value proposition of an organisation or product via the enjoyment of the entire pre-purchase experience (**Coupland, 1991; Keller, 1993; Grassl, 1999; Keller, 1999 Washburn, Till et al., 2000; Howe et al., 2000; Paul, 2001; Chung, et al., 2009; Nga, 2010; Ferguson, 2011; Lazarevic, 2012**)

For a university, like any other business, the internet is viewed as an outstanding marketing tool in the advertising arsenal, with **Herbig et al. (1997:95)** declaring that it is widely viewed “*the most effective promotional tool of the century*” (**Samiee, 1998**).

This advancement of marketing online from a **university perspective** is said by **Mahajan (2001)** to require a “*new approach to marketing*”. With differentiation achieved through continual website improvement, designed to meet the needs of consumers online (**Lohse et al., 2000; Adam, et al., 2002; Hess, 2005**).

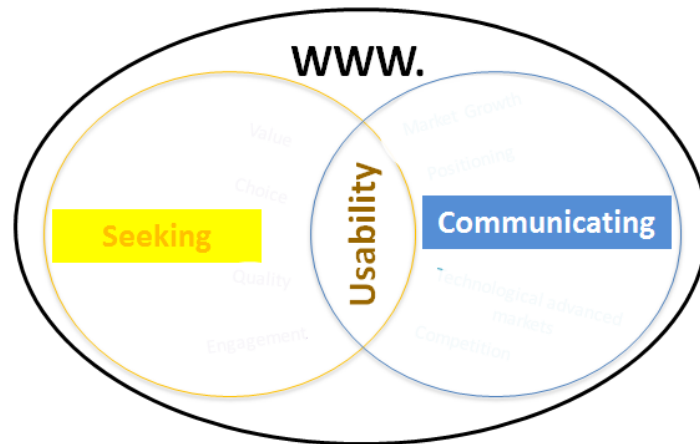
## Communication



Hemsley-Brown and Oplatka (2006:318) assert that the majority of educational institutions recognise “*that they need to market themselves in a climate of competition*” both locally and internationally. There are many factors that influence the manner that a university communicates with its target market, each of which are found within the communication ring of the CM. Using Molesworth, et al. (2011) classification, choices concerning how it wishes to be positioned within that marketplace, Chester can be categorised as a recruiting rather than selecting institution.

With this in mind competing against other HEI’s will influence the marketing communication employed by a university such as Chester. Parasuraman (1986) notes that the intangibility of the service offering, or in this case ‘course’, will have to be differentiated from that of its competitors (Adam, et al., 2002). Furthermore is Sussman and Pollack (1995) Hess (2005) and Lohse et al. (2000) that agree that to meet the needs of an continually technologically advanced or enabled market requires differentiation through continual process of improving website features to enhance their users’ experience online, over that of their competition (Adam, et al., 2002; Brinck, et al., 2002:2; Jeong et al., 2009;).

## Usability



What is at the centre of this model is website **usability** and the focus of this study, but critically considered to linked success online (Davis, 1989; Teo, et al., 2003; Flavián, et al., 2006).

For a 'recruiting university' such as Chester, website usability as highlighted by Casaló et al. (2008) is a determining factor for consumer satisfaction and ultimately **choice and loyalty** (Molesworth, et al., 2011).

Most importantly is that a website must carefully be assessed and reviewed as Donthu (2001) and Wolfinbarger et al. (2002) assert that **students** use a website to assess to attain **value and quality** Post-purchase (Donthu, 2001; Wolfinbarger et al., 2002).

## **2.6 Summary**

This chapter sought to identify the key theorists and current thinking in relation to each research aims. These were conveyed under the headings of: marketisation of Higher Education; internet/e-marketing; and usability. From achieving this, the author constructed a conceptual model in which to best summarise the key themes, so that the following chapter can construct the most appropriate methodology for the collection of data.



# **Chapter Three**

## **Methodology**

## 3 Research Methodology

### 3.1 Introduction

This chapter seeks to initially explore the research philosophy of the author, with the identification and selection of the most appropriate research method for selection based on meeting the aims of the research question.

Furthermore, in the creation of research methodology the author will seek to answer the research question by bridging the gap that Jeong et al. (2009:105) recognises has existed between that of the fields of e-marketing and website usability for some time.

The research design will concentrate upon the measurement of (web) user experience to better understand the nature of an engaging experience and their perceptions of a product (in this case an undergraduate course) prior to consumption (Brinck, Gergle and Wood, 2002:2; Usability Net, 2003; Georgievski and Sharda, 2006).

### 3.2 Research Philosophy

In view of the nature of the research question, the author asserts that an Interpretivist/Phenomenological approach to research will be adopted. This research is based on a combined approach to research, contrasting “*induction*” (i.e. building theory) with the positivist approach of “*deduction*” [i.e. testing theory] as shown in figure 7 (Saunders et al., 2009).

The engaged research will focus on gaining insight regarding web users’ everyday subjective experiences with regards to website design (Fisher, 2010). Furthermore, an inductive approach to research will focus upon the discovery and application of this data, within the context of segments of the undergraduate market for the University of Chester (Glaser 1978; Crooks, 2001; Charmaz 2006).

Furthermore, with the author selecting that an Interpretivist/Phenomenological approach, this study will be constructed using non-probability sampling in the production of qualitative and some numerical data.

### 3.2.1 Figure 7 - Framework for Research

Approach to Research	Philosophy	Time Horizon	Strategy	Approach	Choices	Techniques
Exploratory	Interpretivist/ Phenomenological paradigm approach	Cross Sectional (Snapshot)  60 minutes session X 3  - 35 minutes Questionnaire  - 25 minutes Group Exercise	Usability Questionnaire  Group design ideal university web page	Mixed- method research  with inductive and deductive approach adopted	Qualitative	Literature Review  Semi structured qualitative questionnaire  Mock website construction exercise
Ontology	Subjective ontology, that is socially constructed					
Epistemology	The Internet is a process of social interaction, identifying subjective meanings and motivating actions					
Axiology	Research is value bound, researcher is part of research					
Data collection	Small samples, in-depth investigations, qualitative					

### **3.3 Research Strategy**

#### **3.3.1 Justification for the selected paradigm and methodology**

The basic assumption of this paradigm is that reality is subjective (Creswell, 2003; Hussey and Hussey, 1997), with the researcher having to understand the subjective reality of those they study (Blaxter, Hughes and Tight, 2002; Saunders et al., 2003). This is attempted by the analysis of qualitative data (Blaxter et al., 2002; Cassell, Symon, Buehring and Johnson, 2006; Hussey and Hussey, 1997; Kumar, 1999; O'Donnell and Cummins, 1999; Goulding, 1998).

Through the application of this approach, Amaratunga and Baldry (2001) agree that the researcher will attempt to understand and explain a phenomenon instead of searching for an external cause. Induction or the development of theory is essential in answering this papers research question, as collectively little is already known regarding the relationship between students viewed as consumers of HE, in addition to how the developments in marketing, specifically internet/e-marketing can meet their needs (Goulding, 1998:52; Molesworth, Scullion and Nixon, 2011; Krywosa, 2010a).

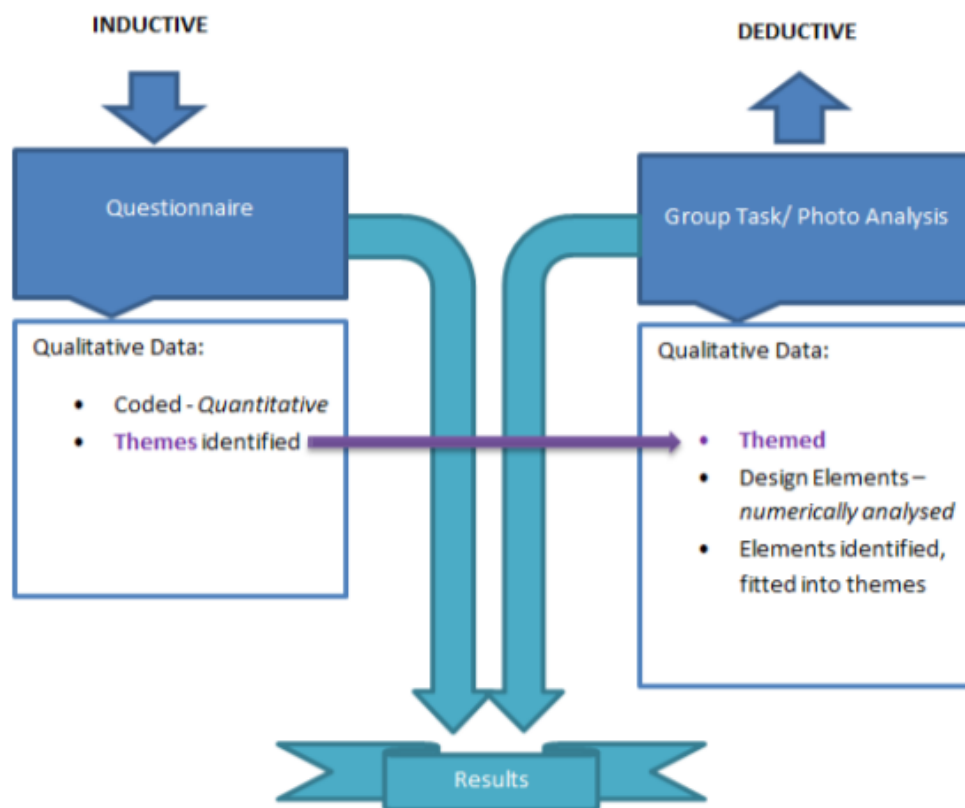
However, criticism drawn by Cassell et al., (2006) regarding the adoption of a phenomenological approach suggests that on occasion qualitative research can lack credibility, with the perception that credibility is closer aligned with quantification and scientific results (Hogg and Maclaran, 2008).

Subsequently, in view of the nature of the research question, the adoption of the author's phenomenological approach is justified as this paper seeks to understand the factors influencing the perceptions of website design, comparing literature with that of data gathered via usability testing (Morris, Leung, Ames and Lickel, 1999).

According to Thomsett-Scott (2006) by involving the users in the design or at least considering the site from users' perspectives, the site will be more *“effective and efficient for the users and they will be more likely to use the site”*.

Subsequently, the data will be gathered following a multi-method qualitative study as show in figure 8.

**3.3.2 Figure 8 – Multi-method Research: Data Collection and Analysis**



### 3.3.3 Data Collection Methods

As this study adopts a multi-method approach, the first method of data collection to be employed is a usability questionnaire. This method will involve the applicant/participant as an observer, applying a subjective ontology. This is based on the epistemological appreciation that the Internet is a process of social interaction that is constantly under revision (Saunders et al., 2009). This interpretistic approach has been selected so that participants can convey their feelings regarding website design via open-ended questions (Hussey & Hussey, 1997).

As website usability is primarily concerned with the measurement of quality that a user experiences, the questionnaire will be focused around giving a user a “*specified set of tasks in a particular environment*” and analysing their responses to these tasks (Usability Net, 2003; Georgievski et al., 2006).

The second method of data collection seeks to identify the elements of website design a prospective undergraduate student desires. Through the observation and results of a group exercise, and summary numerically, the data produced will strengthen this study’s focus upon the individual’s social role within the decision making process (Saunders et al., 2009; Fisher, 2010).

### 3.3.4 Rejected Methods

The author dismissed a number of methods for data collection, as outlined in figure 9 below.

### 3.4 Figure 9 - Data collection methods explored

Data Collection Method	Justification for Rejection
<b>Case Study</b>	As identified through the literature review, there is limited previous research into this area as Gummerus (2004) states that research in this area is in its infancy. There is not one catch all publication in which the author could contrast to be able to answer the research question and aims.
<b>Interviews</b>	Interviews according to Fisher (2011) could have been adopted if there were more individuals involved in data collection. However as this study is focused upon website usability, it is important to capture participant's responses without the potential for interview bias.
<b>Observational</b>	While Krug (2000), Nielsen, et al. (1994), Nagamachi (1995), Hofmeester, Kemp, and Blankendaal (1996), Jordan (1997) and Hanet al. (2001) shared an understanding that website usability traditionally involves participants given tasks to perform and data collected observes the participants actions in the completing of a given task the author choice different data collection method to achieve this studies research objectives. The decision not to evaluate the data from usability observations were based on; firstly the resources; and secondly the time needed in which to gather this data. With elements such as limited time with each participant group and a small number of facilitators available to gather data the author concluded that usability test had to be adapted to fit these boundaries.

### **3.5 Non-probability Sampling**

For this study a purposive selection approach was adopted with particular emphasis on representation of the University of Chester's typical undergraduate students/consumers. Using Universities and Colleges Admissions Service (UCAS) data for 2011, the author identified that the University's' prime catchment area for undergraduate students was North West England and North Wales (UCAS, 2011).

Although not "*statistically representative of the population*", schools sampled are based upon representing pupils with diverse qualifications with a mix of traditional and vocational qualifications. This is founded upon representing the different levels of progression to university (Saunders et al., 2009:239).

Furthermore, for the purposes of this study the author identified the requirement of data collection to consist of individuals from years 11, 12 and 13 as they would reflect differing stages of awareness regarding university websites and potentially contrasting needs (see figure 10).

### **3.6 Participant selection**

Krug (2006) explains that gone have the days of resources draining usability labs to be used for website usability studies. The traditional lab setup with a two way mirror, video recording equipment and the need to recruit lots of participants in order to get results are said not be needed. Adopting the thoughts pioneered by Jakob Nielsen in 1989 and further by Krug (2006), the number of participant users required for each test can be flexible.

With flexibility on sample numbers the author did however constrain the sample minimum number of participants being according to Krug (2006) ideally being no less than three.

The participants gathered were from two schools and one college. The location of which included two from England; firstly Priestly College and secondly Great Sankey



High School both in Warrington, England and the final school was Dinas Bran Secondary High School in the heart of Llangollen, North Wales.

From these schools and college, twenty four individuals were involved in the study, undertaking a usability questionnaire and group exercise. Of the twenty four, eight were female and the remaining sixteen were male. The participants collectively were aged between 16 to 20 years old, and studied within years 11, 12 and 13 of senior school/college.

There were a total of ten schools initially contacted based upon the purposive sampling identified for this study. From this ten, two schools and one college were selected (Figure 10), each offering to be involved from initially being contacted on behalf of the author by the University's Outreach Team.

The authors' decision was for the University's Outreach Team to approach a list of schools and colleges initially to gain responses, as they already had relationships with these schools and were more likely to gain a response than through the author essentially 'cold calling' them.

In addition to the above sampling technique adopted each school and college, participant numbers were limited as many of the required participants were approaching the end of term with exams and were unable to be involved.

### 3.6.1 Figure 10 – Usability test participant selection

Year of study	Age	School/ College	Student decision making process	Awareness of university websites
<b>Year 11</b>	15-16 years old	> Great Sankey High School	<b>Pre-prospect/ Not yet influenced:</b> Currently in GCSE year of study, may have thought about university but a number of years away from applying.	This group of individuals may have thought about university as a future option, but are a number of years away from applying.
<b>Year 12</b>	16-17 years old	> Priestly College > Dinas Bran High School	<b>Prospective Applicant:</b> A few months away from starting their UCAS application for University.	These individuals will be aware of universities and will shortly be in a position to begin searching and applying to universities. It is estimated that a small number may have had exposure to university websites.
<b>Year 13</b>	17-20 years old	> Priestly College > Dinas Bran High School	<b>Applicant:</b> already applied for university awaiting their results	These participants will mostly have gone through the decision making process of choosing whether or not to apply to university. Anyone from this category who has applied to university is defined as an applicant and is awaiting their results.

### 3.7 Data collection

Through the adoption of a multi-method approach to data collection, this study comprised of web usability data gathered from a questionnaire and group exercise.

### **3.8 Questionnaire**

#### **Purpose of the questionnaire**

- To establish the perceptions of the University of Chester's website from a prospective undergraduate student.
- To establish what areas of improvement is required to best answer their needs.

#### **3.8.1 Pilot questionnaire**

The use of a questionnaire provided participants with the chance to submit insightful responses to their user experiences of the University of Chester's website. It is difficult to claim complete objectivity with questionnaire data as the validity of the data is reliant on the honesty of each respondent (Georgia Institute of Technology, 1997).

Furthermore, if a question is either unclear or misinterpreted by the participant, the ambiguity of the data will be further questioned (Air University, 1996; Reagan, 2002). Consequently, to minimise these risks, the author considered that it was vitally important to pre-test the questionnaire (Page, 2001; Reagan, 2002; Saunders et al., 2006).

The first version of the questionnaire was passed to seven people for their comments. One member of the group was chosen because she was highly experienced in the field of questionnaires and survey work. In addition, she had previously passed her MBA and was thus familiar with the requirements of the dissertation. The remainder of the group was selected on the basis that the members could be relied upon to give the author meaningful feedback and not just respond with "*what they thought he wanted to hear*".

The pilot questionnaire can be found in *Appendix 2*.

### 3.8.2 Final questionnaire

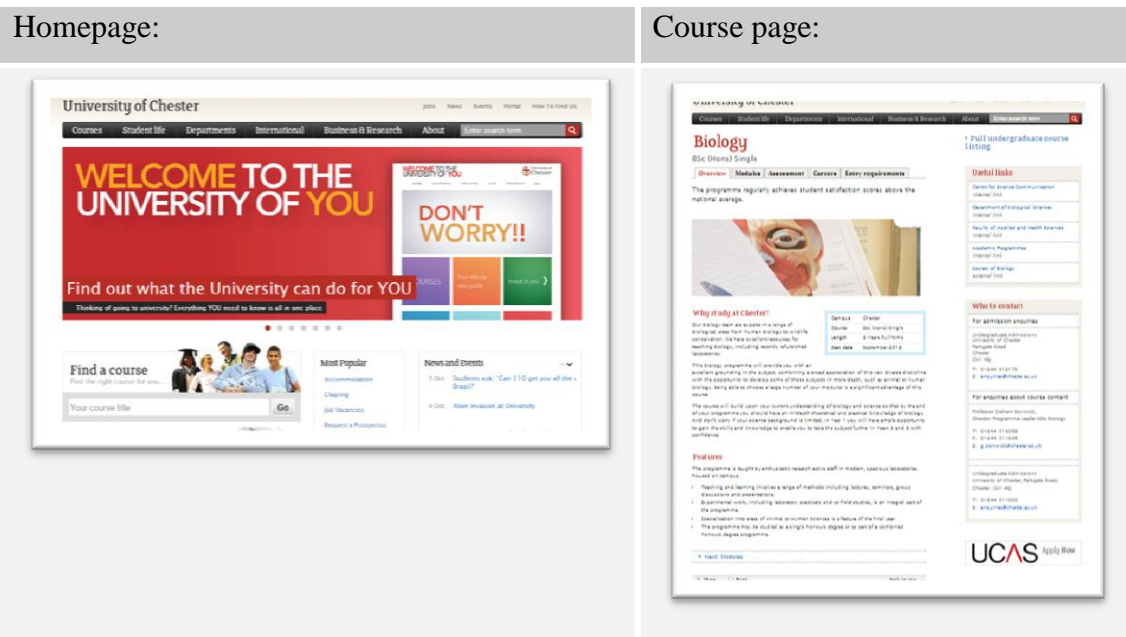
Fundamentally, as with the pilot version, the final version of the questionnaire asked participants to give a snapshot opinion regarding various elements of design and functionality within the University of Chester's website. According to Davis (1989), Teo, et al. (2003), Flavián, et al. (2006) typical usability testing looks to measure the user behaviour against a given task.

As this study was using the University of Chester as an 'example', with recommendations to be applied across other HEI's, the author opted to use questionnaires to gather what Dillman (2007) classifies as "*opinion data variables*". This data collection method will allow common themes to be drawn, which can be further applied to assess other HEI websites (Saunders et al., 2009).

The questionnaire consisted of nine questions in total, and of which two dichotomous questions were placed at the beginning, and at the end of the questionnaire paper. Also included were two questions with rating scales. These also had an open-ended question for the participant to justify/explain their given ratings. Those two included meant that there were seven open-ended questions, in which the author chose to reveal the attitudes and facts of the participants (Grummitt, 1980).

Furthermore, the purpose of this study was to bring "*new ideas or novel points*" on website usability for the undergraduate market as "*predetermined categories*" often restrict fresh ideas or feedbacks (Fisher, 2010:216).

### 3.8.3 Figure 11 – University of Chester Homepage and example course web page



Source: <http://www.chester.ac.uk/>

The questionnaire had three main areas of focus namely homepage, course page (figure 11) and reflection and recommendations, each of which are reflected in figure 12 with corresponding question number.

### 3.8.4 Figure 12 - Questionnaire task and corresponding question numbers

Task	Corresponding Questions
1: Homepage	1,2 and 3
2: Course page	4, 5, 6, 7
3. Evaluation and recommendation	8
4. Participant details	9

The reasoning that there were tasks and questions on different website pages was simply that they carry great importance to a university. Firstly, using the University of Chester as a case in point, it is the homepage that is the most visited area of the website, followed closely by the undergraduate course pages (see Appendix 6). Of the questionnaires two dichotomous questions, Question 1 sought to find how participants found the site via either Google, or another search engine or Chester's URL

(Universal Resource Locator) directly, also known as the Chester website address: [www.chester.ac.uk](http://www.chester.ac.uk).

This was placed at the start of the questionnaire as Saunders (2009) identified the importance of easing the respondent into the questionnaire. However when analysing this answer it became clear that respondents had all selected Google as their method for entering the university website and it was removed from the results.

The author disregarded this information, as the results presented no areas for discussion. The finalised questionnaire was altered from the pilot, due to the short time with each participant and to ensure that Casaló, et al. (2008) criteria for measuring website usability, which was identified from the authors' review of literature (Figure 4 and 13), was adhered to.

### 3.8.5 Figure 13 - The website assessment and measurement criteria

Assessment elements	Measurement indicator	Question Number
Structural/Layout Understanding	The ease of understanding the structure of a system, its functions, interface and the contents that can be observed by the user.	Q 3, Q 5, Q 6, Q7, Q8
Initial perceptions	The simplicity of use of the website in its initial stages.	Q 2, Q 4, Q8
Speed of use	The speed with which the users can find what they are looking for.	Q 6, Q7, Q8
Ease of navigation to achieve goal	The perceived ease of site navigation in terms of time required and action necessary in order to obtain the desired results.	Q 4, Q 6, Q7, Q8
User control	The ability of the users to control what they are doing, and where they are, at any given moment.	Q 4, Q 6, Q7, Q8

*Source: Adapted from Casaló, et al. (2008)*

Question 2 and 4 were used to solely capture the initial perceptions of the user, as Nielsen (2006) states that “*users often leave Web pages in 10-20 seconds*” these sought immediate impressions of the pages the participants had landed on. Question 3 and 5 focused on finding if the purpose of each page was clear to them.

Questions 6 and 7 used a combined rating scale and open-ended questions. For these questions the participant indicated their opinion on scale, with 1 being ‘very poor’ and 10 being ‘very good’. Participants had to evaluate the content and aesthetics, or ‘look’ of each page, and give reasoning for their assessment.

Question 8 sought to capture data across all of the criteria for the measurement of website usability that Casaló, et al. (2008) identified, so to seek potential areas for improvement post-test. The final question reflected gender, and the following question asked what their ethnic group was. Both questions aided the author when analysing and cross referencing other questions.

The questionnaire was completed as the first part of the session with each school. For the final questionnaire see Appendix 5.

### **3.8.6 Approach**

As part of the author’s role within the Marketing, Recruitment and Admissions department at the University of Chester, he approached a colleague the University’s Outreach manager, whom he works closely with to approach the schools and college for their involvement. Of the 12 schools and colleges contacted 5 responded with their availability, which reflects a response rate of 41.5%.

### **3.8.7 Participants/user involvement**

It was outlined to each of the schools and colleges which were approached that to be involved in this study (see Appendix 1) that the requirements for a testing environment had to be based within a computer suite, with enough capacity for each individual student participant to sit at and access the internet independently. The

author's role was to facilitate each session, outlining what is expected of each participant and offering any assistance at any point (Appendix 4).

The questionnaire was self-administered and paper based, to keep the user on the website and as near to typical browsing as possible. In brief, each participant was given a questionnaire/question paper with a number of tasks and mainly open-ended questions to answer. From the total 24 participants, 12.5% failed to complete each question, with 21 participants answering all nine questions given.

The questionnaire was split into two tasks with the first focused on finding the website, first impressions of the homepage and its key features. The second task was centred around an undergraduate course web page, with a focus on layout, content and areas for improvement. The author followed a 'discussion guide' as outlined in Appendix 3, so that the conditions for participant preparation were consistent for each session.

The responses via the questionnaire indicated the perceptions of how the University of Chester website met the need of prospective undergraduate students, and what areas could be improved to further meet them.

The final questionnaire is presented in *Appendix 5*.

### **3.8.8 Checking the data**

The data from the questionnaires was recorded in Microsoft Excel 2010. The data comprised of the following types of variable:

- Structural/Layout Understanding
- Initial perceptions
- Speed of use
- Ease of navigation to achieve goal
- User control



This data was then coded and split into positive and negative (areas for improvement) website design features. The final charts were developed via exporting the results of various queries from Microsoft Excel 2010.

### **3.9 Group exercise**

#### **Purpose of the exercise**

- To attain what elements of content prospective undergraduate students want on a web page.
- To establish what is important to them in relation to web page layout and design.

#### **3.9.1 The Concept**

It was the author's thinking that to truly engage the participants and fully immerse them within the research an exercise was required to facilitate interaction and nurture ideas (Csíkszentmihályi, 1975; Sicilia et al., 2007; Voorveld et al., 2009).

From this, the data collection tool was an interactive group exercise. This was established to extend the research beyond a critique of the University of the Chester's website, widening the results and analysis for the wider HE community.

The exercise that the participants undertook was to collectively design their ideal university course website page from the items given. The course web page was selected as the most valuable to the student and the university, as highlighted in Appendix 6 for the University of Chester. Typically this web page covers module, careers and entry requirement information acting as a product descriptor.

#### **3.9.2 Approach**

The exercise consisted of a group of students, being presented with a number of content elements, which could be selected to construct their ideal university course

web page. Through requesting the group to collectively produce their ‘ideal university web page’, the “*participants are actively involved in the whole process*”, and whilst not considered children, but young adults, their views and involvement are both valuable and legitimate (Kaladjian, 1996; Porcellato, L., Mahon, Glendinning, Clarke and Craig, 1996; Hill, Laybourn, Borland, 1996; Mauthner, 1997; Shulman, 1998; Dughill, L., & Springett, J., 2002:315).

Each group exercise was conducted directly after the questionnaire, and involved the same participants from each school and college. Each group had a minimum of three participants in line with Krug’s (2006) ideology on usability testing, and a maximum eight participants which is said to aid facilitation and response (Saunders et al., 2009; HowTo.gov, 2012).

### 3.9.3 Figure 14 – Group exercise participant numbers

School/College	Number of Groups	Participant numbers (within each group)
<b>Priestley College</b>	2	5, 4
<b>Great Sankey High School</b>	1	3
<b>Dinas Bran High School</b>	2	6, 6

As the authors’ role as facilitator, he explained that they would be given cards representing web content and a blank web page to populate, with the end goal being the creation of their ideal university web page. Each group were presented with the following items:

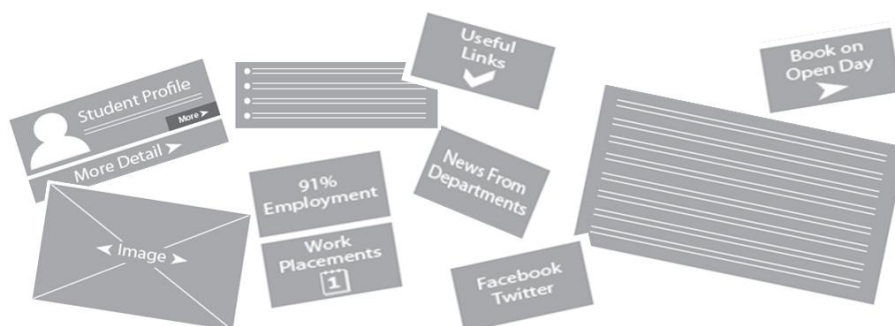
### 3.9.4 Figure 15 - Group exercise components

Items to be used in exercise	Justification
Blank web page template	This gave the group the parameters to work within, challenging them to make accurate representation of a web page design.
Laminated cards (different elements of web content)	The different elements of web content were drawn from current university website content and the Key elements decision making factors for student according to the Higher Education Funding Council for England (HEFCE). This included the soon to be released government created Key Information Sets (KIS), which will soon appear across all university course pages (Baker, 2011; Coughlan, 2011; HEFCE, 2012).
Blank cards and coloured pens	By including blank cards, it allowed the participants to include fresh ideas for website content and design.

The cards shown in figure 16 provided a pictorial idea, without being ‘real’ web content from either the University of Chester or any other website, as to not influence the participant design ideas.

The facilitator explained what each card represented, and each participant had the opportunity to ask any questions about them at any time throughout the activity, which Porcellato et al. (2002) cites as crucial for school pupil involvement.

### 3.9.5 Figure 16: Illustration of cards used within exercise



*Source: Appendix 7*

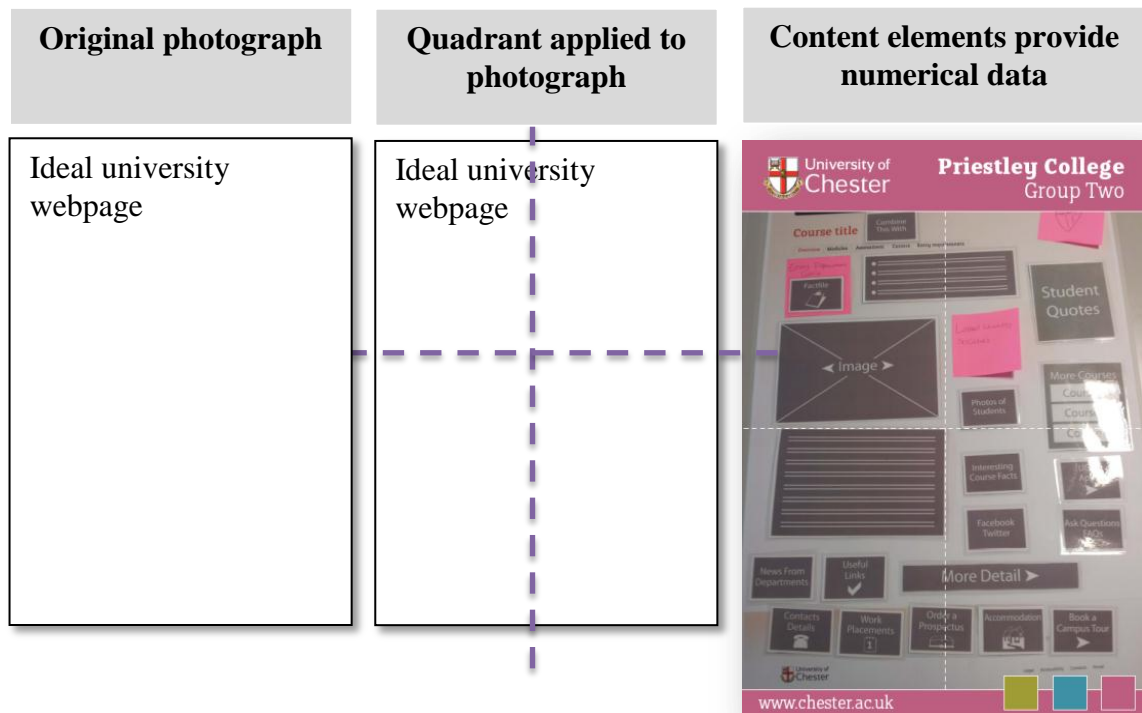
To maximise the interaction between participants, the author produced a facilitator discussion guide (see Appendix 3). This enabled the facilitator to encourage conversation, repeating and rephrasing set questions whilst also adding to the validity or creditability the qualitative data, as it was consistently applied within each school or college group (Glaser and Strauss, 1967; Lincoln and Guba, 1985; Porcellato et al., 2002)

At the end of each exercise, the participants were thanked for taking part and assured that all information would remain confidential. The end result was photographed for analysis, and any notes taken written up in a fuller form immediately after.

### 3.9.6 Analysis of data

All photographed data had dashed lines overlaid vertically and horizontally that created quadrants. This aided data analysis, as each element of content that a group selected could be totalled clearly presenting which elements were consistently selected and were on the page they had been placed by each group, as shown in figure 17. The full data captured for each group and quadrants applied are shown in Appendix 8.

### 3.9.7 Figure 17: Group exercise analysis



Source: Appendix 8

Once the quadrants are applied and the data numerically counted, the themes that the questionnaire generated can be further applied. The deduction of these themes, emerge from the questionnaire data *“rather than only from the categories or pre-existing theories themselves”* (Cohen et al, 2007: 491). ETIC coding has therefore been used to allow themes to emerge from the text itself, ensuring that prior ideas have not been imposed upon the data (Miles and Huberman, 1994).

### 3.10 Coding data

In line with a model proposed by Saunders et al. (2009), the data was analysed in the following manner:

<b>Stage 1</b>	During the questionnaire stage, the data captured were transcribed into a 'Data Display Table' Microsoft Excel 2010 in Appendix 9.
<b>Stage 2</b>	<p>Once all questionnaires had been completed and written up fully, the analysis proper, began. Recurring topics identified across all questions were coded and tallied for each question. This enabled the qualitative answers to be recorded using a numerical code.</p> <p>Once coded the data was then separated into positive factors (user likes) and negative factors (user dislikes or areas for improvement) Appendix 9</p> <p>In total there were 24 codes applied to the data, of these 14 were positive, and a further 10 codes identified as being negative.</p>
<b>Stage 3</b>	<p>This coded data enabled subsequent analysis effective and specific to the themes the author was interested in exploring. The data was grouped under the following themes for further analysis:</p> <ul style="list-style-type: none"> <li>• <b>'Visual Theme'</b></li> <li>• <b>'Content Theme'</b></li> <li>• <b>'Usability Theme'</b></li> </ul>
<b>Stage 4</b>	The Group Exercise data was then analysed in detail. With quadrant sections applied to data, the most common 'web content elements' (see Appendix 7) were numerically tallied within each quadrant of the mock web page.
<b>Stage 5</b>	Once this data has been analysed, the themes from stage 3 were applied to each 'web content element' from Appendix 7.
<b>Stage 6</b>	The final stage of the process was a 'manual' one, which involved the author in the interpretation and analysis of the data. The results of this are presented in Chapter Four of this paper.

### 3.7.1 Coding

Coding was used to aid the analysis of the qualitative questionnaire. According to Saunders et al, (2009) codes can be applied to categorical data, making the subsequent analysis far simpler. In this study, by coding the qualitative data to be categorised, it lead the author to develop themes from these results.

Furthermore, the data from the group exercise is segmented into these themes, which can be cross-referenced against literature theory. Judgements on relationships between themes and theory are then analysed to conclude if the qualitative data agrees with the theory.

### **3.8 Ethical considerations of research**

The nature of this research meant that ethical issues needed to be considered at every stage from selection of the samples, through the data collection stages, to the final analysis and publication of the findings. As this study focused upon the responses of school and college pupils, the methodology for both data collection tools were constructed in line with child safeguarding laws (Home Office, 2012). This meant that all participants were accompanied by a teacher for the entire time of data collection.

#### **3.8.1 Consent**

The importance of consent has been emphasised by many authors (for example Cooper and Schindler, 2006; Robson, 2000; Saunders et al., 2009). The author therefore took great care to ensure that this consent was given freely, and could be withdrawn at any time.

As data collection was undertaken in schools and a college, the author provided the teachers and parents with adequate time to read and send back the consent for participation. Once research was underway the author ensured that he and the teachers had accurate records of any children whose parents had not consented to their children participating in the study. Nonetheless, exclusion from the study was not sought by any participant, or their parent(s), throughout out any stage of the study.

#### **3.8.2 Confidentiality and anonymity**

To a large extent, this important issue (Easterby-Smith et al., 2002; Saunders et al., 2009) has already been discussed above (see for example sections 3.8 and further in Appendix 3). Before the undertaking of each questionnaire it was conveyed to each

group that confidentiality and anonymity would be maintained throughout the process. This was reinforced by the fact that the questionnaires themselves did not have a 'name' field. Further reinforcement was given verbally at the start and end of the each group exercise.

For this reason, nobody has been identified in these pages, and participants are always referred to as 'respondent, or DB (Dinas Bran) User' etc.

### **3.8.3 Conclusion**

In brief this chapter has offered explanation of the various research philosophes, identifying the conflicts between the paradigms. With the Interpretivist/Phenomenological paradigm justified and selected for data collection, the following chapter explores the data collected, seeking to answer this papers research question.



# **Chapter Four**

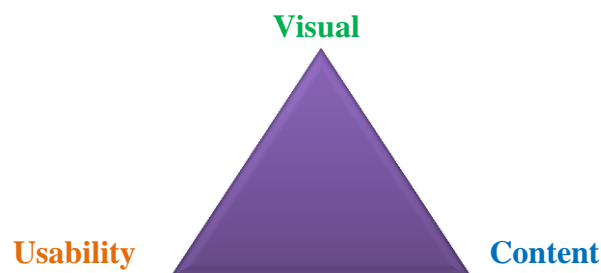
## **Results and Analysis of Data**

## 4 Results and Analysis

It has been identified through the research literature, that the Marketisation of HE has borne witness that UK universities must meet their consumer needs through the application of marketing online (Whitfield, 2006; Hemsley-Brown et al., 2006; Molesworth et al., 2011). What's more, to meet this need and maintain a competitive advantage, the importance of web usability must be considered (Donthu, 2001; Wolfinbarger et al., 2002; Gummeruset al., 2004; Casaló et al., 2008)

In assessing the influences of website design over the choice of university for undergraduate study, the author established that the data gathered projected three strands of importance to this type of user.

### 4.1.1 Figure 18 - Authors principles for improved website design



The strands consisted of; **visual engagement**; **usability** and **written content** which applied together are the author's principles for improved website design (figure 18). The author considers these strands as the primary website design considerations that a university must address, in order to satisfy prospective undergraduate students.

Consequently, the qualitative data obtained from both methods outlined in Chapter 3 will be analysed and discussed further within the context of each strand within this chapter.

## 4.2 Visual Engagement Factors

From analysis of the data, visual engagement for web users can be said to be a primary requirement of website design. According to Shapiro (2011:24) gone have the days that functionality ruled, a user-centric approach is commonly adopted with “*form over function*” is putting the users’ enjoyment at the heart of design.

It can therefore be viewed that good visual hierarchy is a web design priority, saving the user work, by processing the page for them (Krug, 2006). Organising and prioritising content elements in a way in which a user can grasp almost instantly, without having to stop and process the content (Krug, 2006; Smith et al., 2009). From this it is clear that the design and visual execution of content on a web page is firmly an extension of usability, seeking to enhance the entire user experience rather than applying it in isolation.

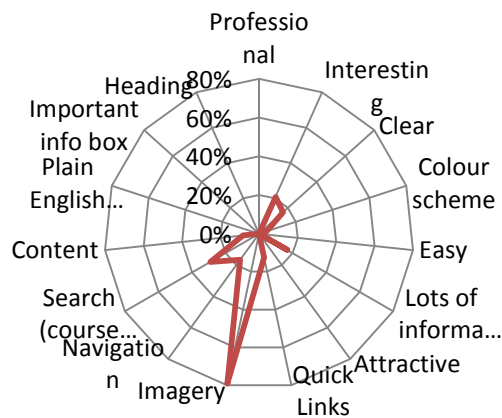
### 4.2.1 The power of imagery

Throughout the entire time a web user is reading text, examining images or navigating menus, they do so using their eyes to make sense of what’s on the screen. Giving consideration to this fact the influence that visual elements of web design hold over a user can be said to be great as “*all the elements that enable these interactions are presented to you visually*” (Porter, 2006).

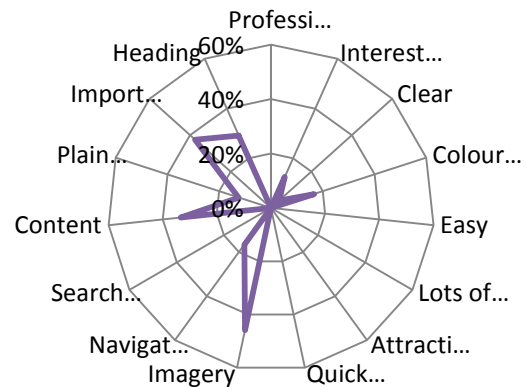
From the data gathered, and evaluation of the questionnaire responses, the most prominent web design element to stand out on both the home and course webpages was established as ‘imagery’ (See Figure 19).

#### 4.2.2 Figure 19: What were the main things on the page that stood out?

##### Homepage Positive Q. 3



##### Course page Postive Q. 5



Source: Appendix 9, Table A & B

With 79% of respondents reflecting this verdict for the homepage, and a further 46% for the course page, the abundant selection of imagery can give an insight to a user's motives online. It could represent a user's need to seek reassurance pre-purchase, with evaluation of future service believed by Hill (1995) to be difficult before it is acquired and consumed. Imagery is cited by Smith et al. (2009) as a component of web design which can reassure users and emphasise the quality of the service offering.

Furthermore, it supports Agarwal et al. (2002), Barnes et al. (2003), Green et al. (2006), Liu et al. (2000), Loiacono et al. (2007) and Palmer (2002) suggestion that perceived quality of the brand and future service can originate from observation of a website.

However, one weakness of asking participants to identify what stood out on the page, could be where images were located on each page tested. Applying the thoughts of Nielsen (2006) and Krug (2006) the majority of web users scan rather than read web pages, generally with a reading pattern that roughly resembles an 'F-shape'. A typical user is said to naturally focus on left of page, scanning diagonally across the page, then back and finally tapering off towards the bottom (Nielsen, 2006).

The results from this study, shows that each image dominates what Nielsen's (2006) outlines as the primary visual area that a user will focus most upon. This makes it difficult to argue that anything other than imagery would have been mentioned, as its location dominates that of any other element on that page.

Nonetheless, contrasting the homepage data against the course page data, does lend significant support to Voorveld et al. (2009:543) assertion that websites with *“moving images evoked more positive affective responses than static websites”* (Coyle et al., 2001).

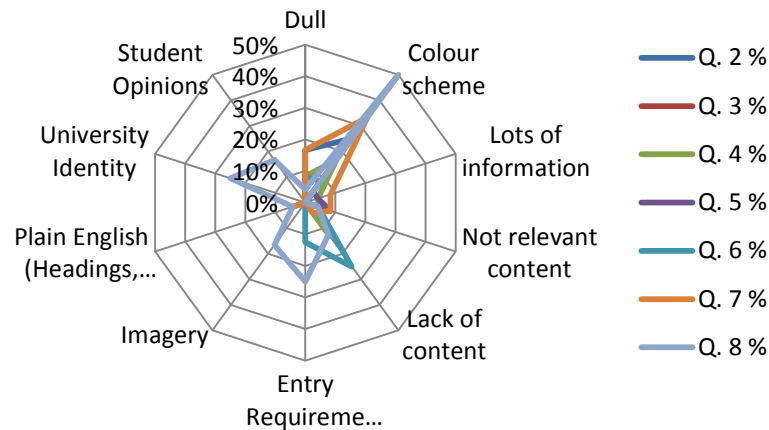
With the design of the homepage presenting the user with multiple images in a moving slideshow arrangement, the contrasting design of the course page, with one static image, generated 33% less observations regarding the visual impact of imagery on the page.

One explanation for the superior amount of positive reactions to images viewed on the homepage proposed by Voorveld et al. (2009) is that image animation on websites, commonly appeal to multiple senses. Consequently, images attract the attention of a user, adding to the persuasive power that a webpage has to encourage user interaction (Yates et al., 2007; Coyle et al., 2001).

#### **4.2.3 Seeking visual improvements**

Whilst the data presented a low number of negative responses to the user's immediate impressions to the University's homepage and course pages, the recurring concern for 16% - 25% of respondents was deemed the websites colour scheme. Colour schemes for websites are regarded by Wroblewski (2003) as a central component of visual design, enabling the user to easily identify the hierarchy of the page.

#### 4.2.4 Figure 20: Negative comments/ improvements to be made for all questions asked



Source: Appendix 9, Table B

When viewing all negative comments gathered from the questionnaire a pattern of responses emerged. With 50% of prospective undergraduate students giving strong indication that a change of colour was needed (see figure 20). A variety of participants reflected that the current website had a “*dull colour scheme*”; or needed to improve through including “*more bright colours*”; or candidly put “*use a different colour scheme - not being a gradient*”.

One comment which the author found intriguing was generated by a male participant from Great Sankey High School. He reflected “*I would like to see more colour as to me it’s a bit dull but if you want it to be 100% professional maybe leave it to what it is*” (SIC).

This comment draws attention to the marketing concept which Hill (2000), Svensson (2005) and Proctor (2008) asserts that the challenge of website design must meet the needs of all consumers. Suggesting that terms such as professional, attractive, clear and easy to use and other cited strengths of the website could be vulnerable with the incorrect selection of colour.

It is widely supported that users, just like any consumer can be segmented into several markets, with differing website demands (Hill, 2000; Ford et al., 2004; Svensson,

2005; Proctor, 2008). A university website must consider, and meet the needs of the following users:

Undergraduate	Typically 18 -21 years old
Postgraduate	Can range from 21 up to 70 years old, typically seeking professional or personal development
Businesses services	Conferencing, workshops and the commissioning of research

#### 4.2.5 Visual cues

Further to these considerations the amassed literature suggests that a website must also build trust (Agarwal et al. 2002; Barnes et al., 2003; Green et al., 2006; Liu et al., 2000; Loiacono, et al., 2007; Palmer, 2002). With everything from the entire background colour of a webpage to the font colour, visual cues tell the user what to expect every step of the way (Krug, 2006; Nielsen, 2006). This is why consistency is crucial to a user's experience online, as Smith (2012) upholds that *"as human beings, we pick up on seemingly insignificant changes and then wonder what's different"*.

Visual changes to a website are often said to unsettle the user, as it is unexpected and promotes them pause for a moment, which in usability terms is disastrous (Krug, 2006; Smith, 2012).

#### 4.2.6 The two components of visual design

According to website design Guru Luke Wroblewski (2003) visual design should be thought of as two interwoven parts: 'visual personality' and 'visual organisation'.

Colour is to be viewed as a component of a websites' 'visual personality', applying a websites look and feel, but representing a lot much more than a 'look' (Wroblewski,

2003). Additionally making the right selection of colours, fonts, shapes, textures, and images for a website, is said to boil down to how an organisation wants to communicate with their target audience (Wroblewski, 2003; Porter, 2006).

Porter (2006) asserts that organisations must make certain that the colour alterations are sending the correct message to the consumer. Applying this theory to a university, the decision is more than merely a question of developing a ‘good visual personality’, but the most ‘appropriate visual personality’ to reflect the core essence of the institution to all its users.

Consideration must also be given to what Wroblewski calls the ‘visual organisation’ of a webpage (Porter, 2006). This applies visual contrast and hierarchy to a webpage, guiding a user through content illuminating the relationships between and importance of page elements (Wroblewski, 2003; Krug, 2006; Porter, 2006).

The task of creating the most appropriate ‘visual organisation’ of a page can be likened to the group task within this study. Visual organisation of a web page involves designing a website with content that will best meet the needs of a particular web user (Wroblewski, 2003; Porter, 2006).

#### **4.2.7 Group task data**

The data from this exercise prompted three key visual content considerations for a university to consider when designing a course webpage. Firstly, the inclusion of an **image gallery** was suggested, with similar functionality to that of the homepage. Each group placed this visual element at the top of the page, with four groups placing it top right.

This would lend further support to Voorveld et al. (2009) suggestion that images, and more specifically image animation appeals to multiple senses, and its prime position on the page indicating it is the most important element for potential undergraduate students (Nielsen, 2006; Krug, 2006).



Further to this idea, four groups selected a graphical representation of **facts about the course**. With 60% of groups positioning this on the left of the page, closely linked to the main body of content, or text. This could well signify the need to illustrate the corresponding relationship between content with relative importance balanced between written and visual elements on a webpage (Wroblewski, 2003).

The final visual improvement, universally proposed by all groups was the inclusion of **student profiles** to be on the centre-right of the page. This new element of content would consist of a student image and supporting written opinion about the course. The author indicates that notes made at the time signified that a number of groups envisaged this operating in a similar manner as the image gallery. Consequently enabling users to interact with the content, glancing through each profile at their own will.

This suggestion, combined with the others that the participants made, support McMillan et al. (2003), Jee et al. (2002), Chung et al. (2004) and Wu (2005) assertion that to increase consumer satisfaction online you must increase their participation. By empowering users to have “*control over the information exchanged*” a user’s pleasure and subsequent opinion of the university will increase (Csíkszentmihályi, 1975; Sicilia and Ruiz, 2007:2; Voorveld et al., 2009).

### 4.3 User-centric Factors

To successfully meet users’ needs a website must be constructed through the application of a user-centric approach to Web design (Davis, 1989; Brinck et al., 2002; Teo, et al., 2003; Gummerus et al., 2004; Flavián et al., 2006; Shapiro, 2011). The inductive usability model constructed for this study maintains similar usability assessment criteria given by Casaló et al. (2008), measuring the interactivity of a user’s experience with the University of Chester website (Brinck, et al., 2002; Georgievski et al., 2006).

In review of the literature Casaló et al. (2008) approach was questioned, as the models conception originates from the commercial banking sector (Donthu, 2001; Wolfinbarger et al., 2002). Yet with the belief that the marketisation of HE is upon us, and universities “*rapidly being regarded as a business, like any other*” this criteria may be all the more appropriate than first questioned (Hemsley-Brown et al., 2006:320; Gibbs, 2002; Parasuraman, et al., 2004; Molesworth, et al., 2011; Morrish et al., 2011)

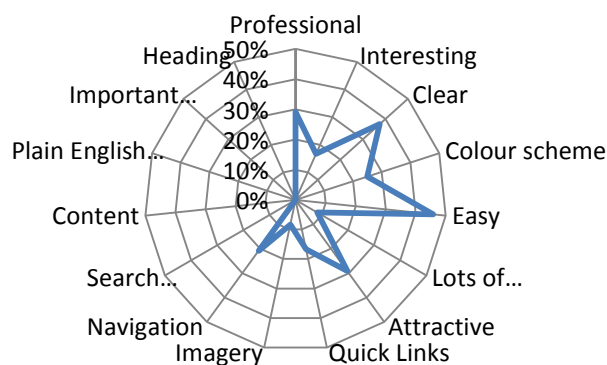
Casaló et al. (2008) indicated one of the benchmarks in the evaluation of usability should be based upon the user’s initial perception of the web page. This assessment was covered by questions 2 and 4 from the questionnaire, which raised this question for the homepage (Q. 2) and undergraduate course pages of the University of Chester website (Q. 4). Each question generated a very positive set of responses, with many usability terms mentioned by participants regarding their immediate impression of each page. This comprised of terms such as ‘clear’, ‘easy to understand’ and ‘easy to navigate’ as shown in figures 21 and 22.

Participant’s responses to the homepage represent two usability benchmarks, which universities must adhere to in the fulfilling the needs of prospective undergraduate students online.

Firstly, with 46% of users stating **ease of use** and a further 38% of users declaring that a **clear layout** led to a positive impression, which in accordance with the thoughts of Krug

(2006) is ticking the right boxes for usability. Krug (2006) states that a website homepage is a gateway to a websites content, so visual hierarchy and clearly defined areas of content will increase usability of the website and keep the attention of the user.

**Figure 21 - Homepage Postive responses Q.2**



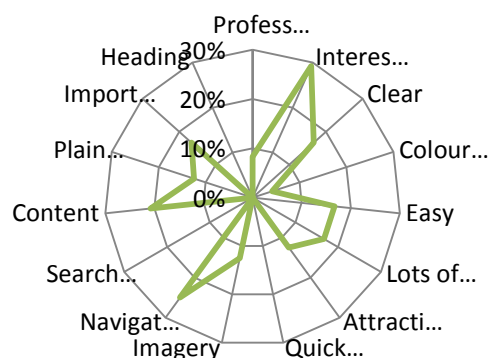
With this in mind, this user-centric approach to design layout certainly gains the approval of the pioneer of web usability, Jacob Nielsen (2011). He stated that “*users often leave Web pages in 10-20 seconds*”, therefore pages laid out in this way will encourage browsing and access to web content more efficiently (Nielsen, 2006).

Contrasting this data with the thoughts of McMillan et al. (2003), Jee et al. (2002), Chung et al. (2004) and Wu (2005) it would appear that increased interactivity of website content is inherently linked to the generation of a positive impression of a website. Additionally, considering the thoughts of Sicilia et al. (2007:2) that “*having control over the information exchanged increases the pleasure of the event itself*”, affirming that a user’s receptiveness to a website can be aligned with increased usability (Supphellen et al., 2001; Steenkamp et al., 2006; Singh, et al., 2006; Voorveld et al., 2009).

With previous literature such as Lewis (2012) and Archer et al. (2003) supporting the theory that undergraduate students are now in the driving seat, this could be said to transcend online with greater demand being placed on university websites.

From this research, the degree of control over their own experience online was said to be central to a user’s needs. Although evaluation of the course page generated a spread of responses the second highest positive response related to the user’s immediate impression of the course page. With 25% of participants mentioning ‘**navigation**’ and a further 17% reflecting **ease of use** of the page, the data certainly lays weight to Voorveld, et al. (2009:535) suggestion that “*the higher the level of involvement, the more positively consumers responded to the website*” (Karson and Kargaonkar, 2001; McMillan et al., 2003; Fortin and Dholokia, 2005; Dahlén et al., 2003; Wu, 2007).

**Figure 22 - Course page Postive responses Q. 4**



One respondent from Dinas Bran summarised this opinion indicating that *“it was easy to navigate to find the information you’re looking for, like entry requirements”* (SIC). Another reflected that the course page was *“easy to follow the overview and the tabs at the top of the course were easy to use, easy to find out what you needed to study that course”* (SIC). These suggestions, observed with the rest of the data in figure 22 suggest that navigation and ease of use is more than structural and functional aspects of a website.

This realisation advocates that all elements that build to make up a web page, should apply the fundamental usability principles of Casaló et al. (2008) when initially being considered for design. What's more, design considerations for navigation and ease of use must extend to the different types of users accessing the website, as either *“goal-directed”* or *“experiential”* users (Wolfenbarger et al., 2001).

#### **4.3.1 ‘Group think’**

By analysing the results of the groups exercise collectively, it has enabled the different types of users discussed, to construct a webpage that will collectively meet their needs. Through identifying content and dictating the relationships between them on the page, figure 23 can be viewed from a usability perspective by classifying content into that of **‘visual’**, written **‘content’** and **‘usability’** elements so to depict a pattern of desired website design.

Krug (2006:18) asserts that all of these elements *“should work together to create near-instantaneous recognition”* of a page to a user. Through evaluating the selection of content by prospective undergraduates a university should achieve.

#### 4.3.2 Figure 23: Collective Group Exercise Data

The screenshot shows the University of Chester website with various elements annotated for data collection. A vertical dashed line divides the page into two columns, and a horizontal dashed line divides it into two rows. The annotations are as follows:

- Top Left:**
  - Image Gallery** - x4 left and x1 right (**Visual, Usability, Content**)
  - Introduction text** - bullet points x4 Left x1 right (**Content**)
- Top Right:**
  - More courses** – A,B,C x2 top right x2 bottom right (**Usability, Content**)
- Bottom Left:**
  - Main body of text** – tends to be left of centre x4 left x1 centre (**Content**)
  - More details** – follows body copy (x5) **Usability**
  - Course facts** – graphic x3 left x1 right (**Visual & Content**)
- Bottom Right:**
  - Student quotes** – x3 bottom, x2 mid/top (**Content**)  
*To be merged with...*
  - Student profiles** – x5 right (**Visual, Usability, Content**)
  - Department homepage** x3 bottom (x2 right & x1 left), x1 top (**Usability, Content**)

The footer of the website includes the University of Chester logo, several promotional banners (e.g., 'Clearing Undergraduate Places available', 'Who'll be on your course?'), and a navigation bar with links like 'Legal', 'Accessibility', 'Contacts', 'Cookies', 'Portal', 'Shop', and social media icons.

The analysis and theoretical judgements on the collective group exercise data is sought in Figure 24.

#### 4.3.3 Figure 24: Collective Group Exercise Data Analysed

Location on page	Group exercise verdict	Justification for selection
<b>Top Left</b>	<p>This position in line with the F-shape reading pattern illustrated by web users, this area of a page can be viewed as the primary segment which a user spends most time (Nielsen, 2006).</p> <p>This space is considered to be the most valuable to a user, and with 80% of groups opting for an <b>image gallery</b> and also <b>introductory text</b> to be included, giving a short insight into a course. The selection of these content elements may support Parasuraman's (1986) and Hill's (1995) notion that consumers want to increase tangibility prior to purchase.</p>	<p>The opening or top of the suggested page will increase user 'flow', enhancing feelings of control over their website experience, as the user can consider whether the course is what they are looking for in a 'snapshot' evaluation though use of the course gallery and introductory text (Csíkszentmihályi, 1975; Jee et al., 2002; McMillan et al., 2003; Chung et al., 2004; Wu (2005) Sicilia et al., 2007; Voorveld et al., 2009).</p>
<b>Top Right</b>	<p>Representing the second most visible area of the page, there was a mix of responses from the groups. The most popular element with 40% of groups selecting it top right was the '<b>more courses</b>' element.</p> <p>This element would provide the user with a small list of courses that are related to the page they are currently on and maybe interested in viewing. This element follows similar usability attributes found on that of major e-commerce websites such as Amazon and ebay, whom Krug (2006) praises for user-centric approach to website design.</p>	<p>The strength of these page elements is the suggested empowerment that it offers users to browse through further related web pages on the site.</p> <p>This meets the needs of both "<i>goal-directed</i>" and "<i>experiential</i>" consumers, with users given the option of exploring either the rest of the content held on the page, or select to view another course from a tailored choice based upon similar courses that may interest them (Wolfenbarger et al., 2001; Sicilia and Ruiz, 2007; Voorveld et al., 2009; Smith et al., 2009).</p>

<p><b>Bottom Left</b></p>	<p>This area of the page has the bulk of the <b>written content</b> with four from the five groups selecting it, and is a typical layout of a page on a website. This is similar to Smith (2012) who suggests that web users often seek familiarity in page layout to aid usability, with users able to digest content quicker and are presented with a layout they are accustomed to using.</p> <p>From the exercise all groups cited that the main body of content should expand when the user selects a <b>‘More details’</b> tab, which will offer the user the option to delve deeper and read further written content about the course.</p> <p>The final content element selected by 80% of groups, at the bottom of the page was <b>‘course facts’</b>. With a majority of 60% of groups inserting this feature on the left of the page. This acknowledged the users need to be engaged visually, whilst highlighting ‘unique selling points’ (USP’s) about the course.</p>	<p>By offering the user to view content about the course in more detail, it offers an online experience in which a user can become fully immersed in their experience online (Csíkszentmihályi, 1975). This element of usability supports the needs of “<i>experiential</i>” users (Wolfenbarger et al., 2001).</p> <p>Enabling them to consider the broader detail of the course if they wish, whilst also offering them “<i>control over the information exchanged</i>”, which has been recognised by Csíkszentmihályi (1975), Sicilia et al. (2007:2) and Voorveld et al. (2009) to increase the pleasurability of using a website.</p> <p>Presenting facts about the course in a visual way under the main body of written content should help to engage and maintain a user’s interests, of which are said to decrease the further they scroll down a page (Krug, 2006; Nielsen, 2006).</p>
<p><b>Bottom Right</b></p>	<p>With 100% of groups indicating that <b>‘student profiles’</b> ought to merge with <b>‘student quotes’</b>, 60% of which indicated these should be placed on the bottom right of the page. Following this was the feature highlighting students who had previously studied the course.</p> <p>Finally, 4 of the 5 groups specified a need to link to the <b>department web pages</b>, and were indicated by 60% of groups that this should be at the bottom of the page. A 40% majority placed this element adjacent to the main body of content.</p>	<p>The standalone student quote represents a current student’s account of the course. This would be enhanced with a profile about the individual student.</p> <p>Putting a face to the quote is suggested by Smith (2012) to build user trust. Furthermore, ‘experiential’ users are enabled to examine in-depth a student’s experience, reassuring a prospective undergraduate student on the future service quality (Wolfenbarger et al., 2001). This element of content is likely to increase the user’s interactivity or ‘flow’ within the website (Csíkszentmihályi, 1975; Parasuraman, 1986; Hill, 1995; Wolfenbarger et al., 2001).</p>

Through analysis of the group exercise data in figure 24, it gives clear indication regarding the elements of content that prospective undergraduates want to experience on a university course page. Additionally, though a holistic assessment on the groups agreed page layout, depicted in figures 23 and 24 the author has deduced and applied the themes generated from the questionnaire data to each element of content on the page. Through the application of these themes there is an emergent pattern in the relationship between ‘visual’, ‘usability’ and ‘content’ elements for the design of undergraduate course pages.

On this evidence, the design considerations for that of a university course webpage must comprise of the three themes, interwoven to meet the needs of all users. This suggestion has been widely rebuked with Cloninger (2000) arguing that adopting a ‘visual’ approach of web design conflicts against that of a ‘usability’ approach. His view, as depicted in figure 24 regards usability design as more analytical and rational than that of visual design, which is believed to centre upon emotions and feelings (Cloninger, 2000).

#### 4.3.4 Figure 24: Visual Vs. Usability Website Design

<b>Visual</b>	The feminine	Right-side of the brain	Being	Art	Emotional	Intuitive action	Inarticulate
<b>Usability</b>	The masculine	Left-side of the brain	Doing	Math/science	Rational	Logical action	Articulate

*Source: Adapted from Cloninger (2000)*

Making sense of this conflict Dürsteler (2000) declares that the fundamental consideration when designing a website is to clearly have in mind the potential consumer, and importantly what must be communicated to them.

Evaluating the different perspectives, it is not a mere question of wanting to transmit emotions or knowledge, as Dürsteler (2000) proclaims “*it's clear that we humans*



aren't 100% brain oriented nor 100% emotion oriented". This illustrates, that the final design of a website should comprise of 'usability' and 'visual' design elements, with Dürsteler (2000) concluding that "design has always been a part of science and of art; both calculation and intuition".

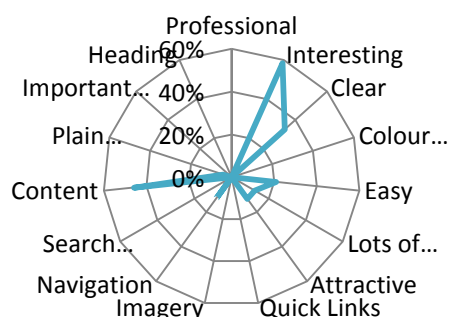
## 4.4 Content Theme

Krug (2006:18) asserts that 'Visual', 'Usability' and 'Content', elements "should work together to create near-instantaneous recognition" of a page to a user. Through evaluating the selection of content by prospective undergraduates a university should achieve.

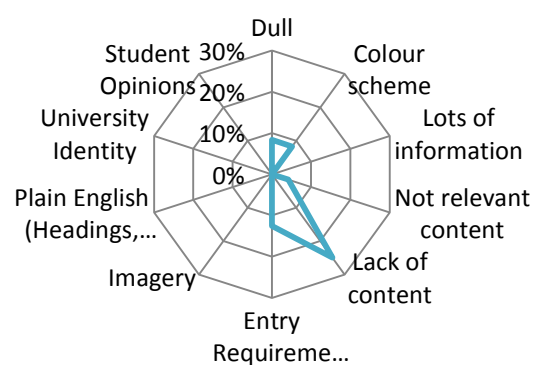
When seeking the immediate impressions of the course page, the largest majority of participants (29%) reflected that the page was interesting and a further 21% cited that the written 'content' gave this positive impression. A conflicting story emerged, that 17% stated the strength of the course page resulted from having 'lots of information' for the user to digest. Yet, 13% of participants identified that the page weakened their experience with a 'lack of content' presented for the user.

**4.4.1 Figure 25: Reasoning participants gave for scoring the content on the page**

**Course page Postives Q. 6**



**Course page Negatives Q. 6**



Additionally, question six probed further into a user's perceptions of the course page content, with users requested to rate the content on page out of 10 and explain their decision further. The course pages received a mean rating of 7.8 out of 10, with 58% participants citing the page content was 'interesting' and a further 46% laying praise to the written content displayed. Yet still this question generated a response of 25% whom reflected the largest area of concern was the 'lack of content'.

Rationale for the apparent disparity in responses shown in figure 25 may stem from the fact that participants could view any undergraduate course page on the website. This may well reflect that particular course pages met the need of the user, with others falling short. This could reflect that the existing layout appeals to either "*goal-directed*" or "*experiential*" users, as suggested by Wolfinbarger et al. (2001). Alternatively the participant's issues may reflect differing quality of written content across each of the course web pages on the website.

The fact that a 'lack of content' was revealed as a concern by participants in two separate questions, expresses the users need in seeking further information. This need could be related to the intangibility of a course, with a user seeking to reduce risk prior to consumption (Parasuraman, 1986; Hill, 1995). This perspective is further supported from the group exercise data, with 100% of groups stating that the user should have the option to access 'more details', expanding the main body of written content further.

Furthermore, the group exercise data presented in figure 23 depicts that written '**content**' must clearly be attainable by the user interwoven throughout the content on the page. Whether it is a caption describing an image or a standalone quote from a student, each element must work together on a page to reduce the "*cognitive load*" for a user (Friedman, 2008).

#### **4.4.2 Familiarity is the key**

Just as '**visual**' changes to a website are said to unsettle the user, content and the layout of content on a webpage must be familiar to a user. This conventional manner in which the page content is presented is said by Friedman (2008) to build users'

*“confidence, trust, reliability”*, proving the credibility of the university (Berry et al., 1985; Grönroos, 1982).

Ultimately, the written **‘content’** is the most important element on a website, with users often said to be willing to compromise on web page **‘visual’** and **‘usability’** factors if the page is supported by high-quality content (Porter, 2006; Friedman, 2008).

It is widely accepted that web pages must be designed for a user to scan the page and attain quickly the relevance of it meeting their need (Brinck, et al., 2002; Davis, 1989; Teo, et al., 2003; Usability Net, 2003; Flavián, et al., 2006; Georgievski et al., 2006; Krug, 2006; Nielsen, 2006). However, it would be incorrect of us to believe that this is the entire role of content on a course page, with the data representing the user’s need to immerse themselves further in written content (Csíkszentmihályi, 1975).

This suggestion is deduced from the group exercise data, with a consensus indicating a need for ‘more details’ after the main body of content. Furthermore, the usability questionnaire established a segment of users unhappy that the course page ‘lacked of content’.

This illustrates the universities need to design undergraduate course web pages that encompasses both ‘scan-able’ and ‘readable’ content elements, to satisfy fully all users expectations in this market (Porter, 2006; Krug, 2006; Nielsen, 2006; Friedman, 2008).

# Chapter Five

## Conclusions

## 5 Conclusions

### 5.1 Critical evaluation of the methodology

This chapter seeks to evaluate the data and analysis presented in Chapter Four in relation to the literature examined in Chapter 2. The author considers that the research methodology was appropriate, since it allowed the research aim and objectives to be addressed and conclusions and recommendations to be drawn.

### 5.2 Methodological approach

Considering the methodological approach the author adopted for this study, the data collected presented a pattern in the website design variables that prospective undergraduates require pre-purchase, whilst also deducing the themes that influence their decision making process.

Generally, it can be viewed that the data gathered enabled the research question and each of the aims of this study to be answered. Yet, whilst the data presented plenty of areas of interest and discussion, the author felt that the insight on critically analysing a university's website design, for meeting the needs of prospective undergraduates was somewhat constrained. Primarily this was owing to a limited number of negative, and a majority of positive participant observations regarding their assessment of the University of Chester website design met their needs.

Whilst the positive comments gathered may affirm that the University of Chester website design largely meets the needs of generation Y users, greater insight into what website design elements did not meet their needs is required. This could have led to producing "*new ideas or novel points*" on website usability, which lends support to Fisher's (2010:216) assertion that "*predetermined categories*" often restrict fresh ideas or feedbacks.

Whilst the period spent with participants was short, both data collection tools produced great understanding into the perceptions of prospective undergraduate users.

The author particularly found the group exercise data pleasing, as participants immersed themselves in the task, lending further support that the interactivity and control over a task develops engagement from generation Y consumers (Csíkszentmihályi, 1975; McMillan et al., 2003; Jee and Lee, 2002; Chung et al., 2004; Wu, 2005; Sicilia et al., 2007; Voorveld et al., 2009).

### **5.3 Aims of the research**

The following illustrates the extent in which each research aims have been addressed.

#### **5.3.1 Research Aim: To critically analyse the contemporary literature in reference to students being consumers of Higher Education (HE).**

The main theoretical discussions on marketisation, illustrate it as being ushered in to HE by the UK Government to bring marketplace ideology (Kotler et al., 1985; Hemsley-Brown et al., 2006; Vickers, 2009). It is not a new concept, but encourages Sorell (1994:913) belief that “*the consumer became king*”, a shift in power which is exhibited online (Cravens et al., 1973; Crawford, 1991; Coupland, 1991; Kotler, 2000; Howe et al., 2000; Paul, 2001; Sherry et al., 2005; Chung et al., 2009).

With the conception that prospective undergraduate students were seen as consumers of HE, it reflected a university’s “*need to market themselves in a climate of competition*” (Hemsley-Brown et al., 2006:318). The requirements dictated by the generation Y consumer, was judged to aid their assessment of quality and value of the university and a given course (Wolfenbarger et al., 2002; Gummerus et al., 2004).

By presenting all variables a prospective undergraduate uses to determine a service offering via a website, user involvement and satisfaction will increase, with any fears associated with the intangibility of the service reduced (Parasuraman, 1986; Mills, 1986; Kelley et al., 1990; Hill, 1995; Moore and Carpenter, 2008; Arsenault et al., 2008).

The data supported that prospective undergraduate students assess service quality pre-purchase using the variables of online service and online experience, with participants

assessed typically adopting either “*goal directed*” or “*experiential*” consumer behaviour (Donthu, 2001; Wolfinbarger et al., 2001; Madu et al., 2002; Yang et al., 2004; De Wulf et al., 2006).

Although this study gives clear indication of the criteria that prospective undergraduate students demand from a university website, it is difficult to evaluate fully the degree of influence over choice of university. Consideration could be further applied with a post-purchase review, after each undergraduate student has enrolled on their course.

### **5.3.2 Research Aim: To identify the most effective e-marketing components for the engagement of undergraduate students.**

It was widely agreed that ‘e-marketing’ or ‘internet marketing’ represents use of the Web to engage consumers, creating a dialogue through use of Internet and interactive technologies (Domegan, 2008). These fundamentals of ‘e-marketing’ translate to components or elements on a webpage reflecting a two way process of communication, ensuring the user has an active, rather than a passive role (Coviello, Milley and Marcolin, 2001; Brady, Saren and Tzokas, 2002; Brookes, Brodie, Coviello and Palmer, 2004; Brodie, Winklofer, Coviello and Johnston, 2007).

The common pitfall that poor e-marketing faces, especially in the eyes of generation Y consumers is that marketing techniques online, will translate to being intrusive and distracting unless a user-centric approach is adopted (Davis, 1989; Keller, 1993; Grassl, 1999; Keller, 1999; Wolfinbarger et al., 2001; Brinck et al., 2002; Teo, et al., 2003; Gummerus et al., 2004; Flavián et al., 2006; Friedman, 2008; Shapiro, 2011; Sharma, 2011; Ferguson, 2011; Lazarevic, 2012).

In reflection of the data collected, ensuring the ‘**usability**’ website, will translate to overall consumer satisfaction and positive association with the brand based upon their online experience (Davis, 1989; Brinck et al., 2002; Teo et al., 2003; Usability Net, 2003; Georgievski et al., 2006; Flavián et al., 2006; Jeong et al., 2009).

It was established that a number of ‘visual’ e-marketing/web page elements, were desired by participants. In reflection of the data collected, it may seem obvious that a web user would be influenced by visual elements of web design, as Porter (2006) asserts that users typically are visually engaged, making sense of what is presented on the screen with their eyes (Porter, 2006). Furthermore, with Wroblewski (2003) assertion that “*design is a means to communicate*”, it is essential for universities to use visual elements to communicate a message to multiple senses, and further by answering the users need of “*having control over the information exchanged*” (Csíkszentmihályi, 1975; Supphellen et al., 2001; Jee et al., 2002; McMillan et al., 2003; Chung et al., 2004; Wu, 2005; Steenkamp et al., 2006; Singh, et al., 2006; Krug, 2006; Nielsen, 2006; Sicilia et al., 2007:2; Voorveld et al., 2009).

Through the adoption of a user-centric approach and ensuring all ‘visual’, written ‘content’ and ‘usability’ components are interwoven throughout their website, universities will satisfy both ‘goal-directed’ and ‘experiential’ consumers, through the reduction of their cognitive load and subsequent ease of use for each web page (Davis, 1989; Keller, 1993; Grassl, 1999; Keller, 1999; Wolfinbarger et al., 2001; Brinck et al., 2002; Teo, et al., 2003; Gummerus et al., 2004; Flavián et al., 2006; Friedman, 2008; Shapiro, 2011; Ferguson, 2011; Lazarevic, 2012).

### **5.3.3 Research Aim - To understand the contemporary literature regarding website usability.**

In seeking to understand website usability and its application within HE the author considered the measurement criteria upheld by Casaló, et al. (2008) when constructing the approach to the collection of data. The conception of a usability questionnaire, focused upon gauging a broader understanding of user needs, and observing the extent in which a university website did or did not meet them.

A pattern emerged from the data suggesting that a number of website features or elements of content recommended for inclusion on a university course web page to best meet the needs of the undergraduate market (Hill, 2000; Svensson, 2005; Proctor, 2008).

Through the deduction of ‘Visual’, ‘Usability’ and ‘Content’ themes, holistic reflection on all data collected represented that these themes are the central



interwoven components for establishing a strong connection with every type of web user (Wolfenbarger et al., 2001; Sicilia et al., 2007; Voorveld et al., 2009; Smith et al., 2009). These elements are recommended to illustrate familiarity and balance on a page, working “*together to create near-instantaneous recognition*”, reducing the users ‘cognitive load’ of a page to the user (Brinck, et al., 2002; Davis, 1989; Teo, et al., 2003; Flavián, et al., 2006; Georgievski et al., 2006; Krug, 2006; Nielsen, 2006; Krug, 2006:18; Friedman, 2008).

Although each of these themes could be viewed as dissimilar, they each, in different ways reveal the users need in seeking reassurance ‘pre-purchase’ (Spiller et al., 1998; Donthu, 2001; Wolfenbarger et al., 2002; Casaló et al., 2008). It is a common concern for service providers’ online; that the evaluation of future service is to a large extent connected to a user’s perception regarding the usability of a website (Parasuraman, 1986; Hill, 1995; Smith et al., 2009).

Therefore university websites must communicate the underlining benefits, quality and value proposition for each course, guiding a user by illuminating the relative importance of elements on the page (Hill, 2000; Liu et al., 2000; Agarwal et al., 2002, Palmer, 2002; Barnes et al., 2003; Wroblewski, 2003; Ford et al., 2004; Svensson, 2005; Porter, 2006; Krug, 2006; Porter, 2006; Green et al., 2006; Loiacono et al., 2007; Proctor, 2008).

#### **5.4 Summary of findings**

Although it can be observed that the decision making factors for prospective undergraduates are varied, on the evidence of this study a university website provides one of the greatest opportunities to influence and meet the needs of this market. With user perceptions on brand and quality of service reliant upon the user experience online. Elements such as interactivity and visual hierarchy on a page, appeal to multiple senses, which is a crucial decision making variable for generation Y consumers online.

## **5.5 Limitations**

As this study focused upon gaining insight from school and college pupils the author had to accept that time for data collection was confined to 60 minutes for completion of both exercises. Additional time would have enabled further exploration of emergent themes.

The extent, to which users were influenced by the University of Chester website design during the group exercise, is hard to attain. By being exposed to features and functionality by undertaking the usability questionnaire before designing their own ideal course web page, could have influenced a participant's thought process and subsequent content and layout results.

After contacting a number of schools and colleges (Appendix 1) the final assembled sample did not give a balanced representation of gender, as only eight were females against a majority of sixteen males. Furthermore, the sample contained an inconsistent representation of age, with two year 12 and 13 groups and only one group of year 11's.

Although this study gives clear indication of the criteria that prospective undergraduate students demand from a university website, it does not extend evaluation into the websites overall influence on university selection, which requires a sample of current university students.

## **5.6 Recommendations for further research**

This study presented a number of opportunities for further research:

- From the data gathered it was apparent that prospective undergraduate students considered the colour scheme to have an adverse effect on their impression of the website. It would therefore be of interest to further define undergraduate user perceptions of differing colour, to attain the most applicable choice to meet their needs.

- A comparable study assessing the influences of website design for prospective postgraduate students would be useful in creating a tailored website to meet the differing needs and markets a university website serves.
- Seeking to understand if the components of ‘Visual’, ‘Usability’ and ‘Content’ themes could be applied to other consumers of HE including, foundation courses, postgraduate, short-courses, business services and research.
- Further examination into generation Y is required to gage their habits, attitudes and ultimate goals in life in relation to HE. By understanding the psychology of the target market, it enables a subsequent marketing strategy to be deduced, and a websites role within the HE marketing and recruitment process to be further defined.
- A study using current university students to evaluate the perception and degree on influence a university website had on their final choice of university (post-purchase evaluation).

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## 6 References

For reasons of clarity, all reference materials quoted below are sourced exactly as found. This means that a number of entries contain American spellings.

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# Appendices

## 7 List of Appendix

### Appendix 1 – Approached Schools and Colleges

Table representing the possible schools and colleges contacted by the University of Chester Out Reach Manager.

	<b>Name</b>	<b>Type of Institution</b>	<b>Qualifications</b>	<b>Region</b>	<b>Year Groups involved</b>
1.	Priestley College	Sixth Form College	A-Levels	<b>North West</b> Warrington	Year 12 + 13
2.	St Richard Gwyn	School with Sixth Form	GCSE and A-Levels	<b>Wales</b> Flint, North Wales	Years 11 - 13
3.	West-Cheshire College	FE College	BTEC's, Diplomas, Access, City and Guilds etc.	<b>North West</b> Chester and Ellesmere Port	14-19 Cohort
4.	Llandrillo College	FE College	Academic and Vocational	<b>Wales</b> Colwyn Bay, North Wales	14-19 Cohort
5.	King Egberts School	School with Sixth Form	GCSE and A-Levels	<b>South Yorkshire</b> Sheffield	Years 11 - 13
6.	Wydean School and Sixth Form Centre	School with Sixth Form	GCSE and A-Levels	<b>Gloucestershire</b> Chepstow	Years 11 - 13
7.	Yale College	FE College	Academic and Vocational	<b>Wales</b> Wrexham	14-19 Cohort
8.	Warrington Collegiate	FE College	BTEC's, Diplomas, Access, City and Guilds etc.	<b>North West</b> Warrington	14-19 Cohort
9.	Aldersley High School	School with Sixth Form	GCSE and A-Levels	<b>West-Midlands</b> Wolverhampton	Years 11 - 13
10.	Dinas Bran High School	School with Sixth Form	GCSE and A-Levels	<b>Wales</b> Denbighshire, North Wales	Years 11 - 13
11.	Great Sankey High School	School with Sixth Form	GCSE and A-Levels	<b>North West</b> Warrington	Years 11 - 13
12.	Whitby High School	School with Sixth Form	GCSE and A-Levels	<b>North West</b> Ellesmere Port	Years 11 - 13

### 7.2.1 Appendix 2 – Pilot Questionnaire



### Improving University of Chester's website

### Task 1 - Evaluation of University of Chester's Homepage

Please write down your immediate impression of the website?

[illegible]

*Your thoughts on the 'look' of the homepage*

<i>Features you like</i>	<i>Features you dislike</i>

*Task 2 - Your thoughts on the 'content' on the Homepage*

<i>Features you like</i>	<i>Features you dislike</i>

*Task 3 - Your thoughts on the Student Life pages*

Features you like	Features you dislike

Page 1

#### Task 4 - Course searching - Navigation

Think of a course subject area that you would like to find out about. Using the University of Chester's homepage as a starting point, search for the course and spend 5-10 minutes reading about the course.

### IMMEDIATE IMPRESSION

## WHAT STOOD OUT

### RATE THE CONTENT

### RATE THE LOOK

### RATE THE DESIGN

4.1 How would you rate the ease of navigation to your preferred course pages? Please circle an appropriate number to indicate how easy or difficult you thought it was.

Easy

Difficult

1

2

3

5

6

7

#### 4.2 Your thoughts on navigating the website.

Features you like	Features you dislike

*Task 5 – Course content pages.*

Using the course pages you've just searched for please outline what you like or dislike about the course information pages:

Features you like	Features you dislike

Page 2

## 7.2.2 Appendix 3 – Facilitator Discussion Guide for Year 11, 12 and 13s

### Introduction (5mins)

- Confidential and anonymous
- Recording to save me taking notes and for reporting accuracy
- Member of Market Research Society and abide by their rules and regulations
- Ask group if they've ever been to a focus group before? Outline rules and regulations
- There are no right or wrong answers!
- Introductions round table – first name, course, year group....

### Tasks

First we're going to ask you about information Universities have to put on their websites to enable you to make your choice of course and institutions, then we're going to ask you to build your ideal website.

#### Task 1 - Yr12s and 13s

Imagine you are about to decide which University you want to go to.

On the table are xx cards each with a factor which may or may not affect your choice of University.

Between the five of you I'd like to discuss which the most important factors are and to rank them accordingly. Again there are no right or wrong answers.

If you cannot decide on a position for a particular factor or you think some are as important as others then leave them side by side or leave them out.

We'll be asking some questions briefly afterwards. You have 15 minutes to rank the different factors and there are spare cards if want to add in any extras. Ideas for prompts:

- Course subject area
- Location of University
- Reputation of the University
- Reputation of the course
- Level of tuition fees
- Student satisfaction survey scores
- Employment information about graduates 6 months after graduation
- Information about graduate salaries 6 months after graduation
- University facilities e.g. sports hall, gym
- Standard of accommodation
- Availability of accommodation
- Availability of IT facilities
- The number of hours you will have with a tutor
- The number of lectures per week
- Financial help
- Profiles of staff
- Profiles of students
- Distance from home of university
- Pastoral care
- Position of University in League Tables e.g. Guardian or Times
- Professional bodies involved in course development
- The availability of work placements
- Entry requirements

### Questions for after ranking exercise



- What are the first things you look for when looking for a degree course?
- Have any of heard of the National Student Survey, Destinations of leavers in Higher Education Survey?
- Prompt: Satisfaction survey
- How much of an influence would you say these survey results are on your choice of University?
- Take a look at this paragraph? (83% of our graduates go on to full time work or training six months after graduation)
- What does this mean to you?
- How much of an influence would you say these survey results are on your choice of University?
- Which factors are more of an influence on your decision making?
- Prompt: location, course,
- Have you heard of a website called Unistats? Have you looked the Unistats website?
- Does this data enable you to choose between Universities offering a similar course?
- Have any of you heard of the Guardian, The Times or Sunday Times University League Tables?
- Have any of you looked to see where your favourite University sits in the League table?
- How much of an influence are these on your choice of University?

The reason for asking you about these surveys is that the Government now expects all Universities to publish results of each survey for each University course. In addition they expect Universities to publish information on the following areas:

- Tuition fees
- Proportion of time spent in various learning and teaching activities – by year/stage of study, with a link to further detail
- Mix of summative assessment methods – by year/stage of study
- Professional bodies that recognise this course, with a link to further detail
- Institution owned/sponsored accommodation: average annual costs - upper and lower quartiles, and number of units (to which students can reasonably expect to have access)
- Private rental accommodation: average annual costs - upper and lower quartiles
- Financial support available from the institution: whether it offers a fee waiver; means-tested support; non means-tested support; National Scholarship Programme; and a link to more detailed information
- Salary data

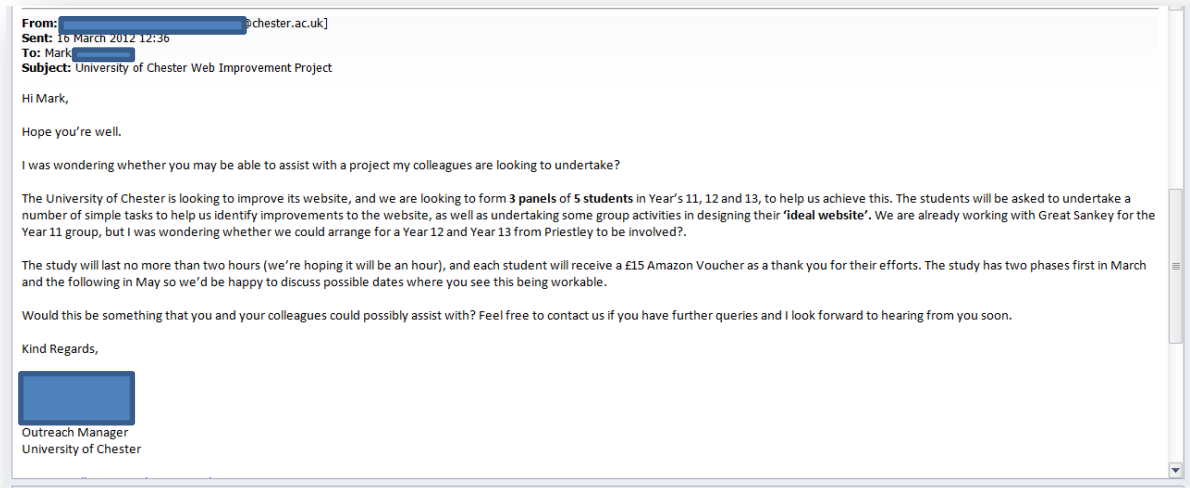
So the next task we're going to ask you to do is to get your views on how you would expect the information to look on a website for a specific course.

### **Task 2 – Yr 11s, 12s and 13s**

We have a blank website here based on the design of our current site at Chester. What we would like to do in a group is to arrange these pieces of information on the template so we can see how you would like it to look in practice. You have 15-20 minutes to do this

### 7.2.3 Appendix 4 – Example email study proposal

The following outline for emailed to each schools and colleges listed in Appendix 1.



*Source: Microsoft Outlook 2010*

*(Author's Note: contact details in e-mail footer have been removed to preserve anonymity)*

## 7.2.4 Appendix 5- Final Questionnaire Example



### WEB IMPROVEMENT PROJECT - STUDENT PANEL QUESTIONNAIRE

Dinas Bran, Llangollen

27<sup>th</sup> April 2012

We would like you to undertake 2 initial tasks to enable us to find out what you think about our website as it stands at the moment.

**Task 1** – Please find the University of Chester's homepage and then turn over the page to answer some questions about layout and content.

There are no right or wrong answers, we just want your opinion.



#### Task 1

**1** Please tell us how you went about finding the site: (circle one box for each answer)

Through Google	Yes	No
Through another search engine	Yes	No
Directly using the University's website address	Yes	No

Other:.....

**2** What was your immediate impression of the Homepage?

**3** What were the main things on the homepage that stood out?

Task 2- Think of a course subject area that you would like to find out more about. Using the University of Chester's homepage ([www.chester.ac.uk](http://www.chester.ac.uk)) as a starting point, search for the course and spend 5 minutes reading about the course.

THEN MOVE ON TO ANSWER THE FOLLOWING QUESTIONS ON THE NEXT PAGE

4 What was your immediate impression of the course page when you landed there?

5 What are the main things on the page that stood out?

6 Using the scale below please rate the content of the page where 1 is very poor and 10 is very good

Very Poor

Very Good

1 2 3 4 5 6 7 8 9 10

Please indicate why you gave it that score in the box below:

Comments:

7 Using the scale below please rate the look of the course page where 1 is very poor and 10 is very good

Very Poor

Very Good

1 2 3 4 5 6 7 8 9 10

Please indicate why you gave it that score in the box below:

Comments:

8 Overall what improvements would you like to see made on the University of Chester's website?

9 About You:

Are you: Male: ☐ Female: ☐

Your age: .....

Your ethnic group:

White: ☐

Black: ☐

Asian: ☐

Chinese: ☐

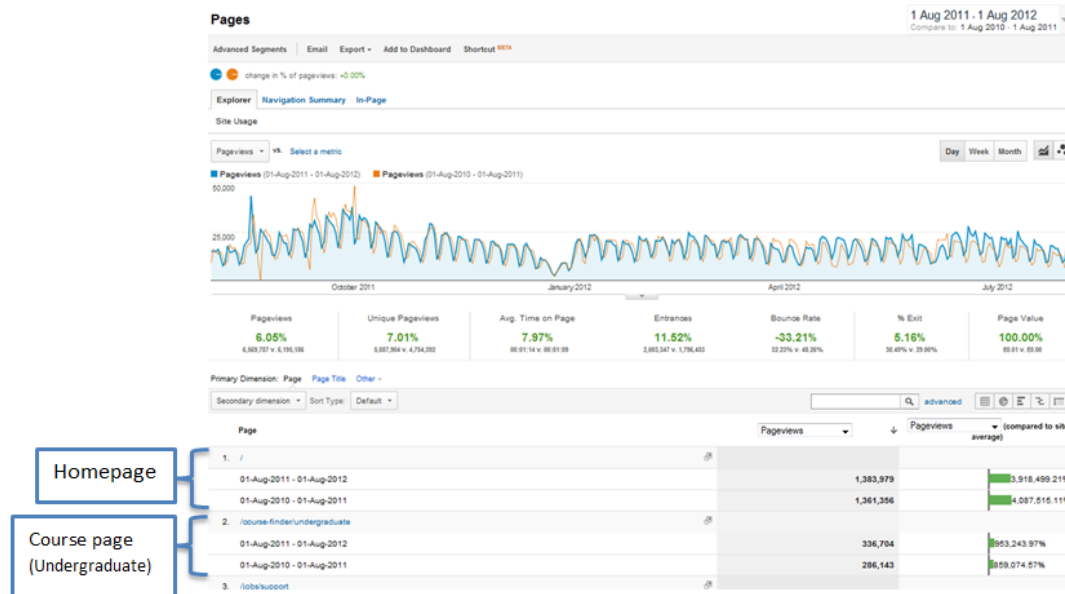
Other: .....

Prefer not to say: ☐

**THANK YOU FOR COMPLETING THE QUESTIONNAIRE – THIS WILL HELP US  
TO DESIGN THE NEW UNIVERSITY OF CHESTER WEBSITE**

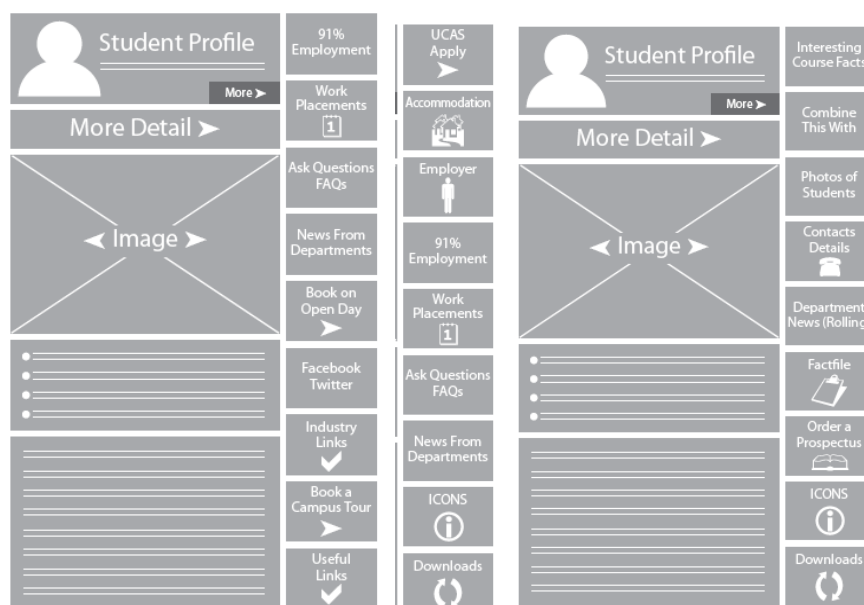
## 7.2.5 Appendix 6- Most visited Content for www.chester.ac.uk

The diagram below illustrates the two most visited pages of content for the University of Chester's website.





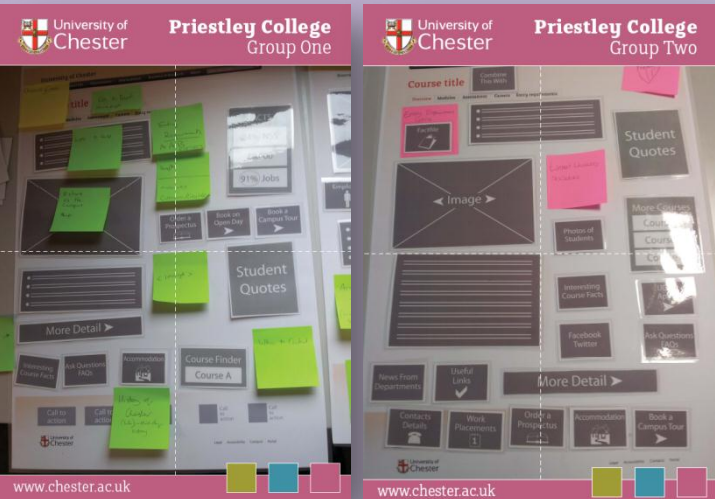
Source: Google Analytics Reporting 2012

## 7.2.6 Appendix 7- An assortment of cards for group exercise



Source: Created by in-house graphic designers at the University of Chester

7.2.7 Appendix 8: Group Exercise Results

Great Sankey High School – One group	Dinas Bran High School – Group one and two	Priestley College – Group one and two
 <p>Wireframe for Great Sankey High School website design. The layout includes a header with the University of Chester logo and 'Great Sankey Group One'. The main content area features a 'Course title' section, a 'Student Profile' section, and a 'Department Home Page' section. The footer contains the website URL 'www.chester.ac.uk' and a row of four colored squares (yellow, blue, green, red).</p>	 <p>Two wireframes for Dinas Bran High School website design. The left wireframe is for 'Group One' and the right is for 'Group Two'. Both layouts include a header with the University of Chester logo and the group name. The main content area features a 'Course title' section, a 'Student Profile' section, and a 'Department Home Page' section. The footer contains the website URL 'www.chester.ac.uk' and a row of four colored squares (yellow, blue, green, red).</p>	 <p>Two wireframes for Priestley College website design. The left wireframe is for 'Group One' and the right is for 'Group Two'. Both layouts include a header with the University of Chester logo and the group name. The main content area features a 'Course title' section, a 'Student Profile' section, and a 'Department Home Page' section. The footer contains the website URL 'www.chester.ac.uk' and a row of four colored squares (yellow, blue, green, red).</p>

### 7.2.8 Appendix 9- Data display tables

#### Positive participant assertions

Table A

Theme	Word	Code	Q. 2	Q. 3	Q. 4	Q. 5	Q. 6	Q. 7	Q. 8
Visual	Professional	P	7	0	2	0	0	3	0
Content	Interesting	I	4	5	7	3	14	0	5
Visual	Clear	C	9	4	4	1	8	5	3
Visual	Colour scheme	CS	6	1	1	4	0	2	
Usability	Easy	E	11	0	4	0	5	4	2
Content	Lots of information	LI	2	4	4	0	3	0	
Visual	Attractive	A	7	0	3	0	3	3	4
Usability	Quick Links	QL	4	3	0	0	0	0	
Visual	Imagery	IMG	2	19	3	11	0	3	
Usability	Navigation	N	5	4	6	4	3	4	
Usability	Search (course finder)	S	0	7	0	0	0	0	
Content	Content	CT	0	2	5	8	11	4	3
Content	Plain English (Headings, Bullet points)	PE	0	0	3	3	1	1	
Visual	Important info box	BOX	0	0	4	9	0	0	
Visual Content	Heading	H	0	0	0	7	0	2	

#### Negative participant assertions

#### Negative participant assertions

Table B

Theme	Word	CODE	Q. 2	Q. 3	Q. 4	Q. 5	Q. 6	Q. 7	Q. 8
Visual	Dull	D	4	0	2	0	2	4	1
Visual	Colour scheme	CS	6	1	4	1	2	8	12
Content Usability	Lots of information	LI	0	0	1	1	0	2	0
Content	Not relevant content	NRC	0	0	1	2	1	2	1
Content	Lack of content	LK	0	0	3	0	6	1	3
Content	Entry Requirements	ER	0	0	0	0	3	0	6
Visual	Imagery	IMG	0	0	0	0	0	0	4
Content	Plain English	PE	0	0	0	0	0	1	1
Visual	University Identity	UI	0	0	0	0	0	0	6
Content Visual	Student Opinions	SO	0	0	0	0	0	0	4



